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cover story

American Psychiatric Association Achievement Awards

The sounds of construction can be heard throughout the United States—construction of community mental health centers. This Adolescent Mental Health Center is going up on the grounds of the North Dakota State Hospital in Jamestown. The Mental Health and Retardation Division of the State Department of Health in North Dakota was given the Gold Award for a Statewide program that has brought comprehensive mental health services into rural areas where before there was none. Five regional mental health centers have

(Continued on Inside Back Cover)

mental health digest

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Altered States of Awareness

ERNEST R. HILGARD

A man knows that he belongs to the human race because of his conscious experiences. Why are psychologists so timid in talking about conscious states, about awareness, when they are the initial subject matter? The answer is psychologists are trying to be scientists and they will do anything to be proper about it, even to denying some of their subject matter.

At the risk of oversimplification, we may recognize three trends in scientific psychology. One takes the form of an attack on intervening variables, particularly on "reification" or making "things" out of traits or states or conscious experiences. This position we may call contemporary behaviorism. A second tendency celebrates human values, revels in experience, and looks for the outreaches of human potentiality, consciousness expansion, and rich encounters. We may call this humanistic psychology. The third is the more moderate one of throwing off the strictures of behaviorism without departing from objectivity, and without rejecting an enlightened operationism. I like to call this "contemporary functionalism." I wish, from the vantage point of the midposition, to examine waking consciousness and its alterations in sleep and dreams, and in hypnosis.

By a normal waking state we mean one in which we can report accurately what is happening in our environment and use this information to control our behavior. We do not do these things well when we are asleep, drugged, or delirious. Under those conditions most of us say that someone is in an altered state, even though the borderlines are hard to define. My point is that I see no reason to deny that being awake is a state, even though it is hard to give it a fully satisfactory definition.

Sleeping and Dreaming as Altered States

With the discovery of the rapid eye movement state of sleep (REM) and a state of sleep defined negatively as nonrapid eye movement (NREM), we know that there are at least three states where we thought there were two. But it did not take EEG studies to tell us that there were two states—waking and sleeping—even though it was sometimes hard to tell when a person was asleep. It is important to remember this when we discuss hypnosis, for the dismissal of hypnosis as a state because we don't know its physiology would be like dismissing sleep as a state before we knew its physiology. Lack of perfect correlation and ill-defined border conditions do not prevent useful experiments from reaching satisfactory inferences through convergent operations.

Work on the operant control of the EEG alpha rhythms is an illustration of the usefulness of combining objective measures with verbal reports. Under the conditions in which the alpha is "on," the subject reports that he is relaxed and not experiencing visual imagery: he usually finds long periods of time in continuous alpha to be pleasant. There are uncertainties and options in any single set of correspondences from two orders of data,

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but in this case there are three kinds of data—operant procedures, physiological indicators, and verbal reports—so that more complex convergences are possible, leading to greater confidence about the inferences to a "mental state."

Our "inventory" of states now adds up to the threefold cycle of waking, REM, NREM, and now another set (alpha and non-alpha) through which people also go, but which they can learn to control in the laboratory, or in certain kinds of exercises, as under a Zen master.

Hypnosis as an Altered State

To get at the problem of the nature of hypnosis, we have experimented on hypnotically suggested analgesia, using two methods to induce pain. The first is the cold pressor test, in which a hand and forearm are placed in circulating ice water. Immersion for 30–40 seconds produces intense pain. The second is ischemic pain, in which a tourniquet is applied above the elbow, the subject squeezes a dynamometer and waits while the pain in the forearm rises. Both kinds of pain can be reduced under hypnotic analgesia, the amount of reduction correlating with the degree of susceptibility to hypnosis as measured by standard hypnotic susceptibility scales.

Accepting the logic of converging operations, we wanted a measure of physiological response that correlated with verbally reported pain. We found a repeatedly monitored measure of systolic blood pressure in the middle finger of the nonstimulated hand to be most satisfactory. For example, in experiments on cold pressor pain not involving hypnosis but with water at four temperatures, we demonstrated a correspondence between the rise in blood pressure with time in the water and with temperature, the blood pressure curves paralleling the verbally reported pain. We found the same relationship with reported pain in the ischemia experiment. So far there is a parallelism between the results with cold water and ischemia, but here the parallelism stops.

In replicated experiments in ice water, using waking controls and a control for hypnosis without analgesia as well as hypnosis with suggested analgesia, we found that blood pressure rose more for the hypnotic analgesia condition than for the waking condition, in the same subjects. One might conjecture that the reports of hypnotic analgesia were not genuine, and that we had a kind of "lie detection" experiment, with the higher blood pressure associated with the reports of "no pain" under hypnosis. However, the same effect was found for the low hypnotizables who were reporting as much pain as ever, so that this explanation is not satisfactory. Apparently, there was excitement associated with the expectations engendered by the instructions, and this was communicated to those who were to become analgesic as well as to those who did not become analgesic. Also the shock of cold water may have had reflex effects uncontrolled by the hypnotic suggestions. The findings show how generalizations from single experiments can be misleading, such as the interpretation that the analgesic effect is the result of relaxation and nonanxiety of the hypnotic subject. Hypnotic subjects without instructions for analgesia were relaxed, too, but suffered pain, and if we use rise in blood pressure as indicating the opposite of relaxation, our most analgesic were the least relaxed and most anxious of all.

We also ran an experiment using simulators to see the effect on blood pressure as they attempted to "fool" the experimenter into believing that they were analgesic. This is possible in a short exposure to the ice water; a subject can be trained to act as though he feels no pain. Those posing as hypnotic subjects in no case found the pain relieved while the subjects selected on the basis of evidence of analgesia felt no pain. What about blood pressure? There was a clear difference between blood pressure under analgesia for the "true" and "simulating" subjects. Both increased their blood pressure but the simulators increased theirs much more than the "trues" increased theirs.

Let me now state some propositions regarding the relationship between blood pressure and pain and hypnosis: When pain is felt in the cold pressor experiment in the normal waking state, there is a tendency for blood pressure to rise in an amount correlated with the amount of experienced pain. In the cold pressor experiment combined with hypnotic instructions blood pressure may rise independent of the amount of felt pain.

The ischemic pain experiments turned out differently. In them, the susceptible subjects not only felt no pain under suggested hypnotic analgesia, for durations of ischemia half again as long as the time at which they were writhing in pain in the waking state, but the blood pressure did not rise. This is not a result of subject selection, for these subjects came from the subjects who had participated in the cold pressor experiment. An effort to use the simulator design failed; we were not able to cajole or train simulators to deny pain under the stress of ischemia. The result is the same, showing the genuineness of the hypnotic analgesia for those subjects who can experience it. This leads to the third assertion about blood pressure and pain

In the ischemic experiment, the failure of the blood pressure to rise, which is correlated with absence of a verbal report of pain, supports the reality of the hypnotic analgesia.

Why should there be this difference between the effects of hypnosis on blood pressure in the cold pressor experiment and in the ischemia experiment? There are many variables to be explored: time factors, effects of temperature confused with the effects of pain in the cold pressor test, amount of prior experience of the subjects, etc. But even though these questions are open they do not deny the finding: susceptible hypnotic subjects, following hypnotic induction with the suggestion of analgesia, felt no pain under circumstances in which they would normally feel excruciating pain, and their physiological responses also attested to the absence of pain.

Were our subjects in a "state" of hypnosis? Often the argument against "state" becomes an argument against the reality of the phenomena, and our experiments settle (unless subsequently challenged) the empirical reality of hypnotic pain reduction. But this is not the basic argument over "state." Our data would have to be supplemented by a demonstration that these same subjects, when not in a "state" of hypnosis, could yield the phenomena. They do not yield them when they are awake; that is, these are not people insensitive to pain. But would they yield them if exhorted, cajoled, their imaginations stirred up, their attention directed elsewhere?

Here we are in difficult territory, because these are methods of inducing the "state" (if such there be) in susceptible subjects. Actually the question is not a decisive one, for people capable of producing hypnotic phenomena can produce them in various ways, through self-hypnosis, at a signal set up through posthypnotic suggestion, etc. It would not matter whether, after demonstration of the ability to achieve hypnotic analgesia in the ischemic pain situation, a subject could do it without special induction procedures. I would expect him to—but he might do it by entering the state of hypnosis, and this is the nub of the question. Just as we know that he experiences pain by asking him, so we ask him about hypnosis. He might be lying, but he usually tells the truth; in any case the experimenter exercises such ingenuity as he can to find out what is so.

Interviews with subjects prior to and following hypnosis have begun to throw light on the cognitive and affective features of the hypnotic involvement, and its relationship to experiences outside hypnosis. To deny the relevance of such observations is to throw away pertinent and illuminating data.

Altered States as Categories vs. States as Causes

The world is too complex and confusing to study all at once, so scientists "stake their claims" through classification of phenomena. Such schemes are in the interest of simplification and order and need not be divisive. But classication serves purposes of more scientific relevance, as in distinguishing phases (ice, water, steam), with rules relating them and their transitions. The same is true in the classification of states of awareness. It is convenient to talk about waking and sleep, sobriety and drunkenness, reality orientation and reality distortion, without thereby disturbing objective reporting of what is known about the phenomena.

The main reason that these labels are objected to is that they run the danger of becoming explanations. The controversy over instincts illustrates this. Instinct was (and still is!) a convenient term for species-specific behavior to describe, e.g., nest building of birds according to species. But if a pigeon returns home *because* of a homing instinct, we get into trouble, for the way we know it has a homing instinct is that it returns home. This same argument holds for "sleep" and "hypnosis."

If one wishes to argue that sleep is not a state, I have no quarrel with that, because the argument is only over words. But if sleep is a state, which most of us accept, then maybe hypnosis is a state, too. Let us see where we are on empirical grounds.

Suppose we apply to sleep the same attacks that have been made on hypnosis. It is difficult to define sleep. It is hard to distinguish it from coma, except by some sort of operational definition: you can be aroused from sleep, but not from coma. (This departs from a "state" definition and hence can be used to argue against sleep as a state.) Or suppose you build a behavioral test, such as what the person tells you when you wake him, whether he reports a dream, or some more "objective" measures such as whether or not he snores or how loud a bell it takes to rouse him. These would be subject to the same criticisms as those leveled against hypnotic scales. Any of these measures can be

"faked." Therefore, we do better to abandon the notion of "sleep," write the word in quotation marks, and stick to the input-output measures that we use in experiments concerned with the phenomena associated with a person lying in bed at night with his eyes closed.

Those who might wish to save sleep as a state, but reject hypnosis, have another argument. We have a physiological definition of sleep—the EEG. This argument does not escape the circularity that the EEG measures of depth of sleep can only be validated by behavioral measures. It would help if there were physiological indicators of hypnosis to define more precisely what condition the subject is in. The search for such indicators is valid and should be pressed. But would we have denied sleep as a "state" before the EEG measures were available? I think not. Hence I do not believe that the absence of physiological correlates of hypnosis is crucial.

The temptation to use state as a cause or explanation is another matter. Even though snoring and dreams occur during sleep, it does not help to say that sleep causes them, for it is possible to sleep without snoring or dreaming. Still, their presence is more likely during sleep. This is an empirical question, and similar empirical questions arise in relation to hypnosis. Is typical hypnotic behavior more likely when the conditions have been favorable for entering a hypothesized hypnotic state? The empirical answer is not easy. The experimental design must take into account the following: many nonhypnotizable people are not going to change following attempted induction; some highly susceptible subjects do not require induction to enter hypnosis; the argument for change with induction rests on a minority of subjects who respond only slightly to waking suggestion but are responsive to suggestion after induction procedures. Under these circumstances, small groups of unselected subjects are likely to lead to no statistical difference attributable to induction.

Suppose the results turn out that there are phenomena associated with the hypnotic state that are not as likely when the subject is not in that state. It is possible to accept all of this without making the state of hypnosis the cause of the behavior, any more than sleep causes snoring or dreams. It would be possible to go on to the definition of other altered states of awareness, such as those engendered by fever or by drugs. These cover a wide range from stupor to ecstasy. All the arguments over states as descriptive and as explanatory apply here as well.

Psychological Education

ALFRED S. ALSCHULER

A new movement is emerging that attempts to promote psychological growth through educational courses. Although most courses have been offered in settings such as industrial training programs, Peace Corps training, and private educational institutes, some have been taught experimentally in public schools. Psychological educators are beginning to meet together to foster mutual collaboration. A number of projects have been funded to introduce this type of education into schools. These efforts, coupled with publicity in the press, will increase the demand from students and parents for these courses.

Goals of Psychological Education

The procedures are the best clues to the goals since it is through these procedures that the desired psychological states are fostered.

Developing a constructive dialogue with one's own fantasy life—In Synectics training students are asked to "make the strange familiar" by fantasizing themselves inside a strange object or to "make the familiar strange" by fantasizing about a common object. In other creativity courses, remote associations are encouraged in order to attain a new, useful, and creative perspective on some problem. In other courses, students are taken on guided tours of day dreams and night dreams and on fantasy trips into their own body. In achievement motivation courses, students are encouraged to fantasize about doing things exceptionally well and are taught how to differentiate between achievement imagery and ordinary task imagery. These eupsychian procedures often bring ignored aspects of one's personality into awareness.

Nonverbal exercises—Often it is easier to understand psychological concepts when they are learned motorically rather than comprehended intellectually. In achievement motivation courses, the concept of "moderate risk taking" is taught through a darts game in which the student must bid on his performance and only "wins" when he makes his bid. The game experience is then generalized to other life situations. In sensitivity training and encounter groups, nonverbal exercises are used to increase channels of communication. Other times nonverbal activities are used because they increase one's expressive vocabulary and are joyful experiences. Proponents of these methods believe that this type of expression, communication, and learning is underdeveloped in most people.

Developing and exploring emotional responses to the world—How people feel is considered more important than what they think. Without emotional experiences ranging from laughter and exhilaration to tears and fear, the instructor is likely to consider the course a failure. Techniques in sensitivity training foster intense emotional confrontation among group members. In achievement motivation courses, strong group feelings support the individual in whatever he chooses to do well. In all these courses, a belief exists that emotion increases meaningful learning and that the ca-

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pacity for affective responses is a crucial human potentiality often underdeveloped in adults.

Importance of living fully and intensely "here and now"—This emphasis takes many forms. In Gestalt awareness training, the goal is philosophically explicit. In most courses, it is subtle and implicit. Usually psychological education courses are held in retreat settings that cut people off from obligations and commitments. The isolated settings dramatize the "here-and-now." Most courses consider references to the past and future as avoidance of present opportunity.

The goals and content of these courses differ from academic and vocational courses in several ways. Psychological knowledge is experiential knowledge in contrast with academic knowledge that is appropriately abstract. It is the difference between knowing about the revolutions of 1848 and experiencing the anxiety of changing a life style quickly. Or the difference between knowing probability statistics and taking action when the odds are 50:50.

Psychological education aims for long-term life changes, not short-term gains and to increase "operant" as well as "respondent" behavior. Operant behavior is voluntary, seemingly spontaneous, and not required by the situation. What a person does with his leisure time is an indication of his operant behavior since it stems from internal cues and needs few external cues to come forth. Respondent behavior requires external cues and incentives.

Most school learning calls for respondent behavior: multiple choice and true-false questions, reading assigned chapters, solving mathematical problems correctly, or writing an essay. Respondent measures of learning do not predict long-term operant behavior very well; when school is over there are few people who follow a person around defining the problems, presenting questions and evaluating the response. Success and fulfillment in work, marriage, interpersonal relations, and leisure time result more from operant than respondent behavior. Educational theorists have begun to draw attention to teaching that results in operant, voluntary, internalized behavior. But academic and vocational success criteria will likely continue to be short-term respondent measures that fail to predict what the student will remember and whether he will choose spontaneously to use what he learned.

The goals of psychological education will undoubtedly change, and new courses will be developed for specific needs. For example, industry was one of the chief supporters for creativity training because it wanted to increase the patent output of its scientists. The Peace Corps has commissioned development of self-assessment workshops to replace the psychiatric, illness-oriented diagnosis that existed in previous training programs. It is easy to envision other courses: identity formation for adolescents; individuation courses for the elderly; training in "helping relationship" for parents, teachers, supervisors, and coaches. Although these courses could have different foci, most likely they would include enhancement of fantasy, affect, and nonverbal communication in intense experiences that develop eupsychian capacities.

Research Questions

It is possible to identify several research questions. Do psychological ed-

ucation courses have greater long-term impact than other therapy and education? What makes the courses more effective? Little long-term outcome research has been done.

One study illustrates how outcome research can lead to development of psychological education as a discipline. The three-year impact of achievement motivation courses for adult business men was studied. The principal finding showed that training stimulated greater entrepreneurial activity. The course was effective only for those men who could take initiative on their job.

This raises questions about psychological education courses. Do students only show change and growth in settings where opportunities for growth are accentuated? Should diagnoses be made in order to accept only trainees whose life situations afford opportunities to develop what they have learned? Should psychological educators assume responsibility for changing the institutions and settings that promote or inhibit growth? Should psychological educators take responsibility for restructuring academic and vocational courses to provide opportunities for initiative, responsibility, achievement motivation, interpersonal sensitivity, and creativity? What is the effect on motivation, creativity, and sensitivity if only new opportunities are provided?

This study also presents evidence identifying what factors are responsible for the long-term changes. The most effective courses included: procedures that taught the thought and action characteristics of people with high achievement motivation; affective and cognitive supports for whatever change the person desired; and making careful long-term plans. The combination of here-and-now excitement and commitment to long-term goals seems to be necessary for maximum effectiveness.

There are difficulties in doing outcome research. What educator can wait several years to find out which inputs he should use? Design and control problems in "change" research are extreme. Operant outcome criteria are difficult to measure and the research is expensive. A breakthrough would consist of identifying those changes during or just after the course that predict long-term growth. A search for these short-term predictors raises a theoretical question. Do the desired eupsychian states simply increase in frequency, or do basic transformations take place much as children move from concrete to formal operational thinking? If the desired eupsychian states are reached through basic transformations, then experiences probably would not bear a one-to-one correspondence to the desired long-term outcome. This developmental approach would require a shift in the short-term, here-and-now course goals.

Developmental theories can be as important to the creation and evaluation of psychological education as are better descriptions of eupsychian states. There is the possibility of developmental theory providing a framework for the proper sequencing of psychological education to maximize psychological growth during the entire life cycle.

Note: This article contains 166 references and a list of psychological education films.

Intelligence, Learning Ability and Socioeconomic Status

ARTHUR R. JENSEN

The research and theory presented here originated in the observation that low IQ children called "culturally disadvantaged" appear in certain ways to be brighter than their more advantaged middle-class counterparts of similar IQ.

On standard intelligence tests children of low socioeconomic status (SES) perform almost one standard deviation below the general population mean, and upper-middle class children about one standard deviation above it. Two theories have been formulated to account for these differences. The first holds that SES differences in IQ are due to environmental or social-cultural influences; the second holds that the differences reflect cultural differences to some degree, but they also reflect genetically determined differences in potential for intellectual development. Most of the evidence supports the conclusion that the second theory is correct. Psychologists, educators, and sociologists have tried to devise "culture-free" or "culture-fair" tests; none has succeeded.

Then what about the observation that, in some ways, low-SES children with low IQs appear brighter than middle-class children of the same IQ? Is this because standard IQ tests are culturally biased so as not to give a true picture of the disadvantaged child's intellectual ability?

Direct Learning Tests

We measured children's learning abilities directly, by giving them something to learn and seeing how fast they succeeded. Many disadvantaged children with IQs of 60 to 80 showed a level of ability that would be unexpected from their low IQs or poor scholastic achievement. Upper-middle-class children in the same IQ range performed in a way that was consistent with their low IQs and poor scholastic performances.

The learning tasks were varied: serial and paired-associate rote learning, selective trial-and-error learning, and free recall, all using a variety of materials and methods of presentation. Our recent work utilizes the digit span paradigm, which seems to be the purest measure of the learning-ability factor measured by the other learning tests, and which shows the same interaction between IQ and SES as the other tests.

Our subjects have been low-SES children (typically called culturally disadvantaged) and middle- and upper-middle-class children, as determined by the neighborhood of their home and fathers' occupation. Mexican-American, Negro, and Caucasian populations were sampled. Low-SES children in these groups were much alike with respect to the phenomena here described.

The results show a large average difference in learning ability between the high- and low-SES groups in the low IQ range. But in the above-average range of IQ, the high- and low-SES groups do not differ appreciably in learning ability, as measured by our tests.

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A related fact is that the learning tests show different correlations with IQ in the low-SES and middle-SES groups. In the low-SES groups, correlations between the learning tests and IQ are in the range from .10 to .20. The correlations for middle-class children range between .60 and .80. In other words, our learning tests could substitute for IQ tests in the middle-class segment of the population, but not in the lower-class segment.

These SES differences in correlation are not due to any psychometric cause, as far as we can determine. This is a phenomenon calling for analysis and theoretical explanation.

Two Dimensions of SES Differences

These results do not lend themselves to explanation in terms of greater cultural bias in the IQ tests than in the learning tests. A more complex formulation is needed to explain these results, as well as other reported findings.

For example, culturally disadvantaged children often perform better on verbal than on nonverbal intelligence tests. By what rationale can one call the nonverbal tests more culturally biased than the verbal? Negro children perform better on the digit span test than on the vocabulary test of the Stanford-Binet. Is this only because vocabulary is more culturally loaded than digit span? Then why do Negro children do worse on Raven's Progressive Matrices than on the Stanford-Binet? Also, several studies have shown that Negro youths performed better, relative to whites, on intelligence test items judged to be cultural, than on items judged to be noncultural. These findings lead to the conclusion that another dimension, in addition to the cultural loading of tests, must be hypothesized.

We cannot discard the concept of culture-free vs. culture-loaded tests merely because no intelligence tests fall at either end of it. Much of the discouragement of attempts to devise culture-free tests has resulted from the choice of the wrong criteria for determining the degree of "culture-freeness."

The proper criterion for "culture-freeness" is the magnitude of heritability estimates that can be obtained for the test in a specified population. The higher the heritability (h^2), the less culturally or environmentally biased is the test for the population in which the determination of h^2 is made.

Intelligence test items can be classified, by factor analysis or related techniques, in many categories or dimensions. The two dimensions we hypothesize as minimally necessary for comprehending the phenomena we have described may be tentatively designated as cultural loading and complexity of learning tasks. Theoretically, these two dimensions are best thought of as completely orthogonal (uncorrelated), although their manifestations in actual test items may be correlated.

Little more need be said about the cultural-loading dimension. It is defined by h^2 for the test in a given population. Research on social-class and race differences in abilities can be aided by taking greater account of this dimension. Group comparisons should be made on two or more tests that stand at distinctly different points on this continuum for each of the groups being compared. Differences between the group means on the various tests

should be plotted and studied as a function of h^2.

The second dimension—complexity of learning tasks—orthogonal to cultural loading, is more difficult to describe, partly because its nature is still being elucidated. It represents a continuum of tests ranging from memory span and associative learning to conceptual learning, abstract reasoning, and problem solving. Near one end of this continuum are such tests as digit span, serial rote learning, paired-associate learning, and free-recall. At the other end are tests such as the Progressive Matrices, Dominoes test, analogies tests, verbal similarities, and tests of the speed of concept attainment.

Another way of characterizing this test dimension would be in terms of the amount of self-initiated activity required of the testee. As we move from the digit span test to the Progressive Matrices, for example, the subject must spontaneously bring more and more covert "mental" activity (discrimination, generalization, verbal mediation, deduction, induction, and hypothesis testing) to bear on the task.

A Minimum Hypothesis

At the present stage of our research we are proposing the hypothesis that the continuum of tests from associative to conceptual is the phenotypic expression of two functionally dependent but genotypically independent types of mental process, which we label Level I and Level II. Level I processes are perhaps best measured by tests such as digit span and serial rote learning; level II by tests such as the Progressive Matrices.

The biological base of Levels I and II are thought of as independent (although functionally related). For example, short-term memory is necessary for solving Progressive Matrices, but the covert mediation and abstraction needed for them are not necessary for digit span performance.

Level I and Level II processes are distributed differently in the upper and lower social classes. Level I is distributed fairly evenly in all classes, while Level II is distributed about a higher mean in the upper classes than in the lower.

Type A children, who are above average on Level I but below on Level II performance, usually appear to be bright and capable of normal learning and achievement in many life situations, although they have difficulties in school work under the traditional methods of classroom instruction. Many of these children, who may be classed as mentally retarded in school, become socially adequate persons when they leave the academic situation. Type B children, who are far below average on both Level I and Level II, seem to be much more handicapped. Not only is their scholastic performance poor, but their social and vocational potential seems to be much less. Yet both type A and type B children look alike in overall measures of IQ and scholastic achievement. This is a major shortcoming of our traditional testing procedures. Tests which assess and distinguish between Level I and Level II abilities must be developed for schools, clinics, personnel work, and the Armed Forces.

Level I abilities may be less affected by environmental deprivation than Level II abilities. The extent to which Level II is dependent upon the quality of the environmental input is an open question. It could be com-

posed of an acquired set of cognitive abilities. The rate and asymptote of their acquisition could be viewed as a joint function of inherited Level I ability and the quality of the environment. According to this view, individual differences in Level II could have no genetic component, other than that included in Level I abilities. This seems rather unlikely, considering the high heritability of Level II tasks such as the Progressive Matrices. Some of our research is aimed at finding the answer to this question. We are especially interested in finding children who by all criteria come from a good environment, yet who show the same pattern of Level I and Level II abilities typical of children from poor environments. If Level II is not genotypically independent, then we should not find low Level II performance (ruling out brain damage, test anxiety, etc.) in the presence of superior Level I ability plus superior environment.

An ancillary hypothesis concerns the growth functions of Level I and Level II measures. Memory span and serial learning ability, for example, rapidly approach their asymptote in childhood, while Progressive Matrices performance increases throughout childhood and into early adulthood. This formulation is consistent with the pattern of correlations between intelligence test scores at early and later ages.

The different forms of these growth functions in middle- and lower-class children would also account for the "cumulative deficit" phenomenon (the relative lowering of IQ and scholastic achievement) often found in culturally disadvantaged children as they progress from early childhood to maturity.

The Prediction Ceiling

EDWARD A. RUNDQUIST

In the six decades of effort to improve the validity of selection tests since Cattell initiated the study of individual differences and Münsterberg used tests in personnel selection, two facts have not changed: validity coefficients seldom exceed .5, and training success is more predictable than job performance.

Why do validity coefficients present such a stubborn ceiling? Is the problem in the predictor or in the criterion? It is the thesis of this paper that both components of the prediction equation are implicated.

Predictors and Validity

Three strategies to improve predictors are item analysis, factor analysis, and the moderator variable approach. Item analysis is founded on the logic that selection of items related to the criterion, but with relatively low intercorrelations with each other, should achieve better prediction. Factor analysis has been tried in order to find a limited number of tests, each measuring a single ability which can be combined to predict success on different jobs. This approach, likewise, has proved ineffective to break the prediction ceiling. A third approach by way of studying relationships within groups, defined by sex, age, or test scores, has a fairly long history. This moderator variable approach seems to have promise. Still there has been no significant breakthrough which enables predictions substantially larger than .5.

A clue to the predictor aspect of the problem lies in the fact that all three strategies are statistical. The closest that constructors of selection tests come to psychological matters is when they analyze the tasks to be predicted, in order to choose the most promising tests for try out. Once provisional prediction instruments are decided upon, test construction is a mechanical matter of item analysis, item intercorrelation, and calculation of reliability and validity.

There are two things wrong with this approach for developing predictors. It does not take into account that man is an open system, nor that he is working as part of a larger system. The major characteristic in an open system is the dynamic interrelationship of its components. This means that the same output can be the result of a different combination of the components, or that the same behavior can be the result of different antecedent conditions. The same digit span score can be obtained by a strategy of grouping or by a waxlike memory; the same clerical aptitude test score by a systematic method of work or by accurate perception; the same score on a verbal analogy test by a good vocabulary or by superior ability to see the relationships; the same score on a visual recall test by near-eidetic imagery or by a high rate of scanning and a good short-term memory. Phenotypic score similarities are no guarantee of similarities in the basic processes involved.

The facts of genetics, as well as the nature of an open system, confirm the existence of differences in antecedents

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to the same behavior. The implication is plain that the predictor variables to identify and measure concern these antecedent mediators. This process involves psychological rather than statistical study. The method of attack is straightforward, although it may be difficult. It involves the discovery of the mediating processes used by all individuals in an entire sample of applicants, in learning to do the job for which success is to be predicted—and if they cannot be so trained, the reasons why. With this information, tests of these antecedent behaviors can be constructed. Using these along with a global predictor will result in increased validity, so long as job and training method remain constant.

The procedure to be described has never been carried out completely. So far as it has been carried out, it will be illustrated by studies on improvement of training methods, rather than in selection. The steps were:

Identification and isolation of as much of a real job as was manageable in the experimental situation.
Establishing relationships between the task and global predictor.
Selecting a group for special study; in this instance, those low in aptitude.
Intensive study of the individuals in this group to identify the mediating difficulties which each man has in learning.
Preparation of a corrective training program in order to verify experimentally, by the subjects' improvement, that the mediator discovered was in truth the source of the subjects' initial difficulty.

In these studies, interest was in discovering Navy Officers' sources of difficulty in learning computer programming. Ability to flow chart was selected as the manageable unit for analysis. It was known that mathematical aptitude was related to success in the course. This was confirmed in an initial study of the smaller unit of flow-charting. Since the problem was to teach the men who were not succeeding, those low in mathematical aptitude were selected for study.

A program was developed with emphasis on providing opportunities for observers to infer what each subject was actually doing, and on providing a detailed record of the subject's activities. The first studies did not yield the information desired, but provided the insight that poor performance stemmed from a lack of strategies for beginning, and for locating the data needed to construct the first flow chart. The program was revised to teach these strategies. It proved to be successful in bringing low aptitude people to the same performance criterion in flow-charting as those of initial high aptitude. But the low aptitude group took more than 50 percent longer.

To complete the strategy, similar identification should be made of the methods of learning and difficulties encountered by groups of moderate or high mathematical aptitude. If the psychological moderators turn out to be trainable and if the additional time for training is not too costly, one might decide to modify or eliminate his selection test and concentrate on improving his training method. This leads directly to the criterion, which shares blame with the predictor for our failure to achieve validity coefficients much better than .5.

The Criterion and Validity

While the terms "system," "systems approach," "systems thinking," etc., are becoming common, it seems doubtful that psychologists have grasped their implications, even for such problems as selection. Just as the same test score can be obtained with

different mediators as antecedent conditions, so can similar output in industrial systems be obtained by a number of combinations of selection, training, supervision, and production techniques. Changing any one of these may produce a marked effect on the output or criterion. The point is illustrated by a study on the effect upon output of different styles of leadership. Managers differed markedly, one being authoritarian, one permissive, and one recessive. Yet there was no difference in output. We cannot conclude that differing styles of leadership do not differ in their effects—only that each can prove equally productive under certain conditions. The entire system must be considered.

Production methods may be devised which will increase output. It may turn out that the methods require extensive training and people of higher caliber. The combination of these two factors may make the introduction of a better method inappropriate in terms of total cost effectiveness. Looking at the problem from the systems point of view, the first step in developing a selection test is an analysis not only of the job, but also of the likelihood of its changing in character, and of the training being used. The next step is to make the training content and job content as identical as possible. The third step is to try, under experimental conditions, to train (using methods suited to each individual) a sample of the total range of applicants to succeed on a job. Taking into consideration cost of training, cost of constructing the tests needed, etc., one can decide whether to concentrate on testing, training program, or on a combination. If it is probable that there will be a change in the job, the time had better be spent in developing selection and/or training methods for the changed job. This approach moves us closer to coping with the problem of specificity of prediction that has plagued the development of selection tests. It does so by recognizing that there are reasons for this specificity and that the best strategy is to develop test programs requiring considerable cost only after relatively stable job and training situations are considered probable.

It is not only when one is interested in a job in its systems context that investigation of mediational variables is profitable. At times it is the only way to discover the essential nature of the criterion one wishes to predict, the kind of training that needs to be given, or the kind of predictor needed.

In summary, there is need for less statistics and more thought and experimentation concerning the mediators of learning and performance, and more recognition of the fact that there is diversity in these antecedent conditions and in the observable performance. Just as the antecedents of individual output differ, so do the antecedents of outputs of similar departments, similar factories, or similar offices. Until we recognize this diversity we will be plagued by inability to reconcile inconsistencies in findings that are apparent but not real, and by inability to achieve progress toward the solution of industrial problems.

Entering College with a Psychiatric History

CLIFFORD B. REIFLER and MYRON B. LIPTZIN

Screening applicants for a history of psychiatric treatment is common in colleges and universities, the Federal government, and other public and private organizations. Questions relating to general health are usually phrased in the present, but psychiatric questions usually cover the past ("Have you ever . . .?"). This question is often put in terms of "treatment" rather than illness. Presumably the rationale is that people sick enough to seek psychiatric treatment are potentially poor risks, especially if they admit it.

What is the relationship between psychiatric history and success? What role should psychiatric screening have in such predictions?

The University of North Carolina at Chapel Hill requires that each student, after being accepted, submit to the health service a medical history and physical examination form. The health service must then give clearance for registration. Included in the form are three questions relating to psychiatric history:

Has applicant ever had any psychiatric or psychological treatment?

Has applicant ever been hospitalized for mental or emotional illness?

Has applicant ever interrupted school or work either because of mental or emotional illness or after psychiatric consultation?

When students answer any of the questions in the affirmative, psychiatrists are asked to judge whether any psychiatric condition exists that would contraindicate matriculation.

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Students who required psychiatric clearance for three academic years were identified. We divided them into two groups. The first group includes those whose education had been interrupted by hospitalization or withdrawal from school; the second those whose education continued without interruption. Students were classified as "successful" if they had not dropped out or been withdrawn and if they were enrolled for the third semester or had satisfactorily fulfilled the requirements for their degree. This is, then, a one-year follow-up study.

The number of students acknowledging prior psychiatric history is increasing each year, but so is the number of students. No data are available as to the total number of students cleared for registration each year, but estimates were made of the total number of "new" students requiring clearance. From these figures the percentage of students requiring psychiatric clearance was calculated.

There is a trend for an increasing proportion of students to acknowledge prior psychiatric treatment. It is, of course, impossible to ascertain whether it is an increase in illness, in treatment, or in honesty. However, the number of students screened represents a fairly small proportion of entering students.

Not all students seen for clearance receive it, and not all students who are cleared subsequently enroll. Clearance may be denied for several reasons; the most common is evidence of psychosis or a recent (less than six

months) history of an acute psychotic episode requiring hospitalization.

No information is available about the 34 individuals who were cleared but failed to enroll. The 362 students who did enroll comprise the subjects of this paper.

The "continued" group consisted of 188 students entering the University for the first time. Their success rate is 86.7 percent. This is significantly higher than the 66.1 percent success rate for the "interrupted" group.

The "interrupted" group represents 33 students who transferred from other institutions and 141 former University students who were usually known to us at the time of their prior illness. Although there is a suggestion that the transfer students have a higher success rate, this is not statistically significant, and the subgroups were combined for further analysis. There were no significant differences in performance between academic classes.

Ideally the comparisons to define the relative risk of our two groups would involve identifying the students of the same class entering in the same period who did not acknowledge prior psychiatric history. Unfortunately, it was not possible to obtain these data.

In 1966, however, a study of the graduating class of 1964 identified those students who originally entered this class and those entering in successive years. From this study figures for attrition of freshmen and other undergraduates, one year after matriculation, were obtained. These are the best available data for comparison in that they at least represent relatively recent data from the same institution. No such data are available for graduate students.

The comparison entering freshman class had a one-year attrition rate of almost 25 percent. The attrition rate of 36.7 percent for the interrupted freshmen group is not significantly different. The attrition rate of the continued freshmen group is 12.8 percent, a figure that approaches significance in the direction of better performance. Other undergraduates of the continued group had an attrition rate of only 6.4 percent, a figure significantly lower than that of the transfer student comparison group, estimated at 19 percent. Interrupted undergraduates, with an attrition rate of 34.4 percent, did significantly poorer as a group than this comparison figure.

An attempt was made to determine the nature and extent of the risk that students with prior psychiatric history demonstrate. All students who were disturbed enough to warrant psychiatric hospitalization or medical withdrawal from school for psychiatric reasons during the three years of this study were identified. It was determined whether they had been previously cleared by our service, and if so, whether they fell into our interrupted or continued group.

Of the 158 students requiring hospitalization or withdrawal, fewer than 14 percent had received clearance and of these, almost two-thirds had had a prior academic interruption. Only seven continued students of the 188 cleared over the three-year period required hospitalization or withdrawal because of psychiatric illness. Of the unscreened students who were hospitalized and/or withdrawn, there were almost that many (five) who had had prior psychiatric attention and had not acknowledged it.

Why then have we continued to screen? First, regarding the inter-

rupted group, the vast majority of these students have been medically withdrawn or hospitalized while enrolled at the University. There is little disagreement regarding the necessity of a screening psychiatric evaluation for these students prior to their return to school.

We feel that before we can clear such a student for return to school, we need some behavioral evidence that the condition that necessitated his withdrawal is under better control. Such evidence would be demonstrated ability to function effectively over a period of time in a goal-oriented, productive manner, such as steady employment or part-time academic work by correspondence or at a school near home. Psychiatric treatment is rarely made a condition of return, although it is pointed out that it may help the student gain a better understanding of the difficulties he was experiencing and also aid in achieving the evidence of behavioral stability necessary in order for him to return.

Six months is the minimum time necessary to accumulate the behavioral evidence of stability and to integrate any modifications of feelings or behavior into his personality. Many students either enlist in the military service or are drafted; after satisfactory performance on active duty, they are usually cleared for reinstatement.

Denial of clearance usually means postponement of clearance rather than refusal. Of the 31 students denied clearance, 14 reapplied and were cleared for readmission during this study.

While we have no knowledge of how often our denial of clearance was inappropriate, our impressions and anecdotal reports of "denied" students who subsequently returned support our contention that a six-month wait after a major disruptive psychiatric illness is usually the minimum time required for the student's reintegration to a sufficient level to perform adequately in a college setting. A semester or two loss of time, if we are overcautious, is less hazardous to the individual (and to the college) than the chance of a recurrence of illness if the return is premature.

Considering students in the continued group the question again is asked, why do we continue to screen? One reason might be that it is an attempt to identify those students who are emotionally disturbed or who may become emotionally disturbed, to inform them of the availability of existing facilities, and to refer them for psychotherapy. This type of screening is a standard practice at many colleges, but there seem to be few studies to evaluate the effectiveness of these procedures.

Any student sick enough to be denied clearance will soon be called to our attention, and, if necessary, he can be withdrawn at that time. There is serious question whether the expenditure of a considerable amount of professional time and effort to screen students whose education has not been interrupted might not be better directed to other areas of prevention and treatment.

Psychiatric Impairment in Welfare and Nonwelfare Children

THOMAS S. LANGNER, EDWARD L. GREENE, JOSEPH H. HERSON, JEAN D. JAMESON, JEANNE A. GOFF, JOHN ROSTKOWSKI, and DAVID ZYKORIE

Our data are based on cases from the Manhattan Survey of Psychiatric Impairment in Urban Children. In the full study, 1,034 households were chosen in the Manhattan area of New York. Each family had children between the ages of 6 and 18, one of whom was randomly selected as the study child. A psychiatric social worker or equivalent interviewed the mother. She was asked about the child's behavior with her, father, brothers and sisters, other children, and in school. Using the interview information, a psychiatrist rated each child on eight areas of impairment and gave him one global rating of impairment. He assigned a "caseness rating" (a rating of five showed that the psychiatrist felt that intervention was necessary and that he was 90 percent confident of his judgment). He also gave each child a diagnostic impression.

The first rating, made without knowledge of the child's background, allows independent correlation of social data with impairment. Only this rating is used here. The second rating allows the psychiatrist to take into account mitigating circumstances. The third rating provides an idea of what a total psychiatric evaluation might be if all information were present. The psychiatrist also interviewed a fourth of the children and saw their mothers during the same visit. The information makes it possible to compare the symptoms elicited by examination of the child with those given by the mother.

The cases were separated into three groups: families with incomes below $6,500 a year receiving Aid to Families with Dependent Children (AFDC)—low-income welfare families; families with incomes below $6,500 but not receiving AFDC—low-income nonwelfare families; and families with incomes above $6,500 a year—high-income families. The sample consists of 25 welfare families, 104 low-income nonwelfare families, and 254 high-income families.

The low-income families are mostly Negro and Spanish-speaking. A slightly higher percentage of the low-income Negro families were receiving AFDC. Only a small percentage of the AFDC families were white. The income distribution of the welfare and nonwelfare families is different: the welfare families are among the lower levels of income under $6,500 a year; the low-income nonwelfare families among the upper levels.

Impairment—The percentage of children having marked or severe to incapacitated ratings for total impairment are similar for both low-income groups. But children of welfare families have a higher average impairment risk than the children from the low-income nonwelfare families. A higher percentage of the welfare children than the nonwelfare children have moderate or worse ratings in developmental impairment than do low-income nonwelfare children whose ratings are similar to the sample as a whole. Low-income nonwelfare

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children are also healthier than low-income welfare children in school functioning and relationship with natural father. The welfare children and the low-income nonwelfare children differ little in impairment of relationships with peers and symptom impairment, with both groups displaying greater impairment than the high-income children. Neither group of low-income children differs in impairment of self-confidence but both have twice as large a percentage as the high-income children. The percentage of poorly motivated, apathetic, or pessimistic children is the same for the welfare and the nonwelfare children, but the nonwelfare families have fewer children with moderate self-confidence impairment.

Impairment of relationships with brothers and sisters differs from other areas of impairment. The higher rate in the high-income group may be due to greater rivalry for parental affection. The high impairment of welfare children seems less related to rivalry than to general impairment and suggests the association of welfare status with poor ability to function as an individual, as a member of a family, and to get along with other children.

In the rating of need for intervention, for 24 percent of the welfare children psychiatrists recommended intervention with 90 percent confidence; the nonwelfare low-income children have a slightly lower percentage. Both groups have a higher proportion of potential "cases" than the high-income group.

Father and father substitute—Of the welfare families 56 percent have no father figure (natural father or father substitute—a stepfather or a boyfriend of the mother, including a common law husband—who had been present in the home for at least a year). This is more than twice the proportion of the nonwelfare children. The welfare children (by definition) are disadvantaged by comparison with the low-income nonwelfare children, as the welfare family is typically without a father. The fact that there were almost four times as many low-income households as high-income households without a natural father or father substitute illustrates the socio-economic contrast in family and social organization. But the absence of a father figure should not be treated as crucial in mental disorder without further study. Broken homes, in themselves, may not be a noxious influence.

Psychiatric diagnostic impressions—Each psychiatrist formed a diagnostic impression without knowing the child's demographic background or parental behavior.

The proportion of children with possible psychotic disorders is three times as high in the welfare group as in the nonwelfare group, which has a rate similar to the higher income group. From the standpoint of services, these children should have immediate care, perhaps as inpatients. The low-income nonwelfare children have a higher proportion of reactive disorders than the welfare children—the proportion is similar to that of the high-income children. The nonwelfare low-income children may have advantage over the welfare children if their reactive disorders are part of a defense against environmental stress that will enable them to rise above their low-income status. This is in contrast to those who react to environmental stress with psychotic-like states. The greater prevalence of developmental deviations and brain syndrome in the welfare children also points toward serious difficulties in this group.

Both the nonwelfare and high-income groups contain 3.5 times as many children classified as having compulsive personalities as the welfare group. The proportion of overly inhibited personalities is low among the welfare children in contrast to the children in low-income nonwelfare families, who are even above the high-income group in this category. Mistrustful personalities (paranoid) and isolated personalities (schizoid) are heavily represented among the welfare children. A marked trend is also apparent in the percentage of welfare children with an anxious personality.

Pregnancy and birth—The heavy proportion of out-of-wedlock births in welfare families should be associated with younger motherhood. The mean age of the welfare mothers at the time the "sample" child was born was 25.4 years; of the nonwelfare mothers 26.8; and of the high-income mothers 28.4. The proportion of mothers 14-19 years old when the "sample" child was born varies from 10 percent and 13 percent for welfare and nonwelfare low-income mothers to 5 percent for high-income mothers, perhaps indicating that out-of-wedlock births are associated with low income rather than with welfare status in itself.

Few mothers reported other than full-term pregnancies. Therefore, the weight of the study child at birth was used as a better indicator of prematurity than average length of pregnancy. About 26 percent of the welfare children weighed under 6 lbs. at birth, as compared with 21 percent of nonwelfare children and 12 percent of high-income children.

How prematurity affects development is a matter for investigation. The higher rate of psychotic disorders and brain syndrome among the welfare children suggests a connection between impairment and inadequate prenatal care or difficulties in intrauterine development.

Mothers' symptoms and complaints—A list of questions about symptoms and complaints was used to determine whether the welfare mothers suffered from psychiatric impairment. These questions are highly correlated with psychiatric impairment and with psychiatric evaluation in 1,660 persons, randomly chosen, studied earlier.

More welfare mothers said they felt weak all over and had periods of days, weeks, or months when they could not get going; more said they felt apart or isolated even among friends and had periods of great restlessness.

Sharp contrast exists by income in symptoms and complaints. With the exception of feeling apart or isolated, the low-income mothers reported each complaint in greater proportion than high-income mothers. The welfare mothers apparently had greater psychiatric impairment than the others.

Child's relationships with his parents—The higher percentage of overly dependent personalities among the welfare children suggests that the welfare mother's economic dependency resulted in a psychological dependency she communicated to her child. But other evidence does not support the diagnostic impressions. When the mothers were asked if their children are "often dependent on them," only a slightly greater proportion of welfare than nonwelfare said "often." Other data indicate more dependency in nonwelfare families. Perhaps their dependency is due to a more controlling family structure in nonwelfare families.

Apparently, the authority of the

nonwelfare mother is not based on fear: only 18 percent of the low-income nonwelfare children often or sometimes feared their mothers, as contrasted with 28 percent for the welfare group. Similar proportions of other groups were reported as often warm and loving with mother. Tension may be present between mother and child in low-income nonwelfare families: 10 percent of the low-income nonwelfare children fought physically with their mothers; the rate for the welfare children in this respect was zero.

The welfare children were more dependent on their fathers, though few of them had fathers in the home. The possibly greater dependency on their fathers may stem from the general instability and insecurity of the welfare family. More of the nonwelfare children were reported as often warm and loving with their fathers than the welfare children. In the categories indicating a disturbance in the father-child relationship—being fearful of the father and fighting physically with the father—the welfare children have the greatest impairment.

In all groups the children with fathers or father substitutes had less impairment than those without fathers. The welfare children have the greatest psychiatric impairment. In fact, the welfare children without fathers show the greatest impairment of any subgroup of children. This finding supports the trend of professional opinion toward the belief that welfare requirements that reduce or exclude payments when a father or father substitute is present in the home should be changed. Combating other social problems such as unemployment and poor health that may lead the father to abandon his family in poverty is crucial in helping families because the presence of a father figure is correlated with an improved impairment rating in the child.

But the mere presence of a father is not enough to alleviate or prevent psychiatric impairment in the welfare child. The inability of the "underemployed" welfare father to provide adequate income for the family may lead to acute conflict in the family. If the current structure makes the welfare father a detriment to the economic welfare of the family, something is wrong with the rules.

Effects of mother's employment—Fewer welfare mothers had paid employment than low-income nonwelfare mothers or high-income mothers. Impairment drops among the children of working mothers as compared with nonworking mothers. The children of nonwelfare families show this tendency more weakly. In the high-income group and in the sample as a whole, the children of working and nonworking mothers show no sizable difference.

The findings suggest that giving some welfare mothers education and job training and finding jobs for them could help their children.

The problems and handicaps of welfare children do not originate in their low-income status only. Attempts to overcome dependency on welfare should not concentrate solely on providing income to families in need. They should provide opportunities for families to gain the self-respect and assurance they need to function effectively in society. This means that changes must be made in welfare laws and in the attitudes of legislators and the public toward the poor.

Treating the Incarcerated Offender

LOREN H. ROTH

Recent events forewarn a clash between progressive and traditional methods of handling the convicted criminal. There is the statement of the American Bar Association decrying long sentences and advocating a maximum term of five years for any but the most dangerous offenders. The press and other media are investigating and castigating conditions within penitentiaries.

But this point of view has its opponents. A Gallop Poll showed that "Law courts are 'too soft' on criminals in the opinion of large majorities of Americans interviewed." From 1965 to 1968 there was an increase from 48 percent to 63 percent of persons who felt that the courts were not dealing "harshly enough" with criminals.

What is needed is an approach that will be acceptable to the public, motivate inmates to seek rehabilitation, and motivate staff to provide it. "Rational authority" is such an approach. I have borrowed this term from other writers who define "rational authority" as "providing a firm structuring of the treatment relationship, setting limits and controls, and establishing a graduated series of sanctions." This is not a permissive philosophy, and yet it is humane and potentially constructive.

What are the objectives of "rational authority" and what is the evidence to support these objectives? One objective is to give the terms "rehabilitation" or "treatment" a concrete meaning. A view of the offender as a medical or psychiatric patient exclusively will probably not be fruitful. We do not know what percentage of offenders are suffering from conditions likely to be accepted as physical or mental illness. Also the view that all offenders are sick ignores data showing that a large number of confirmed recidivists are products of deprived, disorganized backgrounds who lack the skills to "make it in the free world." A definition of treatment must include social as well as psychological variables.

An approach based on "rational authority" can communicate to the offender that even though society does not necessarily regard him as sick, there are areas in which he is disabled. And in these areas the staff will work with him to increase his skills and talents. The offender should also be informed that the administering authority recognizes that deprivation of freedom is the main punishment of incarceration. It is a punishment that he can expect to recur if he continues to commit illegal acts. This is more honest than the attitude communicated by some courts that the inmate is sentenced for his own good, rather than that of society.

Deprivation of freedom is punishment and no amount of semantics will make it otherwise. There are no more bitter inmates than those who are sentenced for "rehabilitation" but who find only isolation and repression behind the walls.

Another objective of "rational authority" is to promote harmonious relationships between treatment staff and correctional officers (guards).

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The views of correctional officers drift toward two poles. There are those who regard treatment staff as permissive, nonjudgmental, and dangerous to the security of the institution. At the other pole are those officers who expect the clinician magically to alter long-standing antisocial behavior. Treatment staff are also guilty of not recognizing the intuitive or practical knowledge that has been accumulated by correctional officers. There is a tendency to discount the talents of these men to deal with the dangerous offender. Inmates do not respect treatment personnel they can "con" or manipulate. Learning how not to be "square" though not necessarily joining the subculture, is a requisite for communicating with inmates.

The third objective of "rational authority" is to establish realistic limits and guidelines for constructive relationships between staff and inmates. There is a tendency to forget that involuntary treatment has intrinsic limitations. The relationship between the two parties is not contractual for neither party is free to opt out; inmates are involuntary residents of a prison, not patients. Most operations will continue along traditional lines until society ordains a more innovative way of handling the convicted offender. For judges or penitentiary staff to promise more produces a crisis of unmet expectations similar to that occurring in the area of civil rights. The inmate's own conviction that he has become "rehabilitated," for example, will not automatically lead to his parole.

What are some barriers which retard the operation of "rational authority" within the penitentiary? There are at least three areas where our system of legal justice requires change.

First, "rational authority" is a system of temporally appropriate rewards for appropriate behavior. However, the operation of the penitentiary is oriented more toward punishment of unacceptable behavior. The inmate who has gained a vocational skill or increased his reading ability seldom has the opportunity to profit from this advance. The reward he expects is parole, which may occur at some indefinite time. If this reward does not materialize or is too distant in time, his interest in "rehabilitation" is extinguished; the momentum of therapy is lost. A challenge for the penitentiary is to develop avenues whereby an inmate may be upwardly mobile without unacceptably compromising custody functions.

"Rational authority" depends on the integrity of staff who are the "authority figures." Though this is generally not a problem at Federal institutions, one-fourth of inmates in drug addiction treatment programs at one prison claim that they first "used drugs" while in State institutions. Corrupt behavior on the part of staff confirms the offender's defense that all society is crooked, but only some men are unlucky enough to be caught.

Sentencing and parole decisions should be more deliberate, individualized, and responsive to the performance of the man. This implies that inmates must be informed as to what, in their case, is the purpose of incarceration. Unless the system is modified so that intelligent "disposition," as well as the more ideal concept of "justice," is the orientation, it is unfair for the public to hold the penitentiary accountable for rehabilitating those men who are sentenced to it.

Behavior Rhythms in Mental Hospitals

MURRAY MELBIN

Patients in a small private mental hospital behave crazily more often on weekdays than on evenings and weekends. In a large State institution this timetable of disturbance does not occur.

I discovered the timetable when examining data collected in a study of mental hospital aides at two hospitals. One was the private institution, the other the State hospital. Along with recording the aides' conduct, we noted what patients were doing. The observation totaled 48 hours for the private and 55 hours for the State hospital.

I grouped bizarre acts according to three categories: unusual verbal behavior, unusual physical gestures, and performing an ordinarily private act in public. Unusual acts are those for which people are put into mental hospitals. In grouping disturbances into common and unusual, I used my judgment about their frequency in our society. We have all enacted the common forms or at least have observed such acts in daily life. It is the frequency, the repetitive enactment of an unusual repertoire, or severity of a performance that leads to branding the actors crazy and consigning them to mental hospitals. This classification is, of course, a matter of controversy.

Following the classification, I discovered the pattern in the timing of disturbances in the private hospital. The pattern of findings suggests an experimental design. The frequencies are arranged as if some circumstance was sometimes introduced and sometimes withdrawn in the private hospital (call its patients the Experimental group) but not in the State (Control group) setting. The outcomes of this hypothetical circumstance were more unusual disturbances on weekdays. This difference prompts a retrospective search for a plausible factor that was varied. If one is found, it will not be a demonstration parallel to a laboratory experiment in which the variable is deliberately introduced or withdrawn. It is a natural experiment.

The two groups are partly matched. They are similar in sex, age, and in locales in which they were observed, but had different socioeconomic backgrounds. More upper- and middle-class persons are in the private hospital. Use of tranquilizers and other drugs is higher at the State hospital, which may explain the fewer active disturbances per capita there, but it cannot account for the timetable.

The structure of a mental hospital is founded on the assumption that environments may be designed in which disturbed behavior may be controlled. Decisions to house patients on one ward or another are based on how manageable they are and how responsive to treatment they appear to be. This routing and rerouting is justified by ascribing control of behavior to forces that can be located in the individual or in his environment. Inner impulses are always pressing for expression. The form in which they emerge is competently managed by the mentally healthy person, but in illness there is a weakening of control to the point where impulses break

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through and are discharged in strange ways. Hospital staff make this hypothesis explicit when they conclude that an individual showing disturbed behavior should be on a locked ward.

Staff members thereby testify that they act as alter egos for patients who cannot care for themselves. One would expect that unusual disturbances would occur less often when skilled staff are present. The private and State mental hospitals do differ in the availability of professional personnel. The former has an ample staff of psychiatrists, social workers, and psychologists who have frequent contacts with patients on weekdays and Saturday mornings.

In the State hospital there are fewer professionals, so that there is little difference in the composition of the staff at different times. Much of the contact with patients is focused on diagnosis at admission. Many sites are rarely visited.

A Reverse Placebo Effect

The professionals' presence in the private hospital is in phase with the occurrence of unusual disturbances. Do they influence patients' behavior in ways they do not imagine?

The influence begins to be established as patients are inducted into the culture of the hospital. Induction proceeds with acknowledgment that psychiatrists, psychologists, and social workers are experts in matters of behavior disorder. The clinician indicates that he will develop a therapeutic program and asks the patient to help him understand the nature of the illness to be cured by telling him where and how it hurts. As the patient cooperates the expert deals tolerantly with symptoms, conducting himself so as to instill trust and to get the patient to join him in focusing on the problem.

The hallmark of psychotherapy is the repetition of this ritual. The patient shows his broken mind—as he would his broken arm—to the specialist, and the specialist reciprocates with tolerance and focused interest.

Just as acceptance of a placebo may lead to the disappearance of symptoms, the same conditions—a patient's trust in his clinician and aroused expectancy of help—may lead to unusual disturbances if the therapeutic regime promotes the expression of symptoms. Patients from higher socioeconomic backgrounds have more familiarity with and faith in medical practice They have more confidence about getting well than do those from underprivileged backgrounds. So professionals enjoy leverage over patients in the private hospital that contributes to the reverse placebo effect.

The private hospital also is a training ground for a large medical school. Each year several residents become apprentices, there are graduate students receiving field work experience, fourth-year students from the medical school, and a score of budding psychiatric nurses. A core element of the curriculum is teaching them how to recognize different types of mental disorder. Whereas an experienced clinician might scan disturbances with a slow-to-judge eye, the residents and students respond eagerly from intellectual interest and a desire to assume professional treatment manners. A student might even cherish an event that demonstrates illness, believing that he is on the right track when it appears.

The State hospital has few professional treatment personnel and few

trainees. Staffing patterns for both the weekday and the evening-weekend periods are similar. Aides make up about 70 per cent of the hospital staff and are more broadly responsible for the patients' welfare. Not well informed about matters psychiatric, aides are not selectively responsive to unusual events.

Environment-Regulated Internal Processes

The course of action that makes kin of placebo effects and self-fulfilling prophecies has a wider scope of influence than forms of illness. It can lead to improvement or deterioration of performance in other spheres of activity as well. Many processes internal to individuals come under environmental control. The extent of this regulation is only now beginning to be realized.

We now know that one's ripening intelligence can be aggrandized by one's teachers, that effectiveness in thinking is conditioned by sensory variety, that light is a pacemaker for body functioning, that a dose of an inert substance delivered in an appropriate context may result in the disappearance of physical symptoms, and that appearance of psychiatric symptoms may be harnessed to the presence of other persons. The workings of a psychiatric self-fulfilling prophecy will have much in common with the ways in which other internal processes are regulated by external agencies.

Before one man can meet another's expectations, the latter must do something overtly. Information must be transmitted through muscular movement of the first person and received through the sensory channels of the second. It is easy to notice events that modify everyday social behavior. Glimpsing the messages that affect internal activity is harder.

The process begins with an expectation in a person's mind. He becomes prepared to respond in a particular way to what he anticipates. This muscular readiness or perceptual set, augmented by an expectation, may result in his performing the initial phase of the response that he anticipates. It may be noticed by the other person. Students on the lookout for key symptoms they are learning about make advance deliveries of partial responses to those symptoms. The response has now become a stimulus.

I have found that the use of additional sensory channels to convey the same message serves a function similar to redundancy in verbal communication. An individual's sense organs operate interdependently. If some sense receptors are not used in communicating, they are open to the receipt of interfering signals. This is probably why a parent or teacher exclaims, "Look at me while I'm talking to you!" It is equivalent to establishing a high signal-to-noise ratio in radio communication. In this way someone can convey an expectancy stimulus for unusual acts more fully, by utilizing more sensory channels in ostensibly the same behavior that others employ.

If his expectation is confirmed, the clinician may transmit an institutionalized signal of the treatment procedure. A standard gesture in therapeutic practice is to ask, "Why did you do that? What's the matter?" This validates the patient's act, for it reiterates the initial interest of the expert in the nature of the illness.

Why would a patient continue to be responsive and repeat his performance? I do not think the clinician's

response has to have a rewarding character. The reason is that in a realm as feebly understood as mental illness there is uncertainty about just what to do to help a patient. The staff engages in groping and erratic behavior toward him, not harmful, but directionless. In this haphazard milieu, it is enough that there be one predictable reaction on the part of the clinician. The patient may make disclosures of unusual upsets because he has learned that such conduct brings his environment under control: it summons a reliable response from the clinician.

Although they first become contingent upon the presence of clinicians, unusual disturbances may acquire a rhythm subject to secondary cues. The periodicity of unusual disturbances becomes attuned to whatever events in the milieu signal the weekday period. These cues are afforded by the behavior of nonprofessional personnel and of other patients who respond to clinicians in the vicinity. This may be any conduct that differentiates the time period, whether it is formality, uneasiness, imitation of therapists, or other.

One more mechanism deserves mention. Since humans are capable of orientation to the future, the temporal component of interaction with clinicians may be affected. An interesting aspect of linkage between physiological functions and time of day is that, once a synchronization is established, the performance curves of physiological activity become phased so that they appear anticipatory. The heart, after idling most of the night, begins to hasten its pumping rate in advance of the person's awakening. At the private hospital, unusual disturbances occurred most often on Monday, as if patients had readied a big hello for the professionals' return.

Events in the private hospital suggest that some of the methods of treatment and teaching may serve one goal while subverting the other. The psychiatric patient must learn when to act sick in order to receive help. But health is gauged according to the absence of handicapping symptoms. So after getting professional attention and guidance the patient is expected to show fewer unusual disturbances. At the same time, attention to unusual symptoms is part of the training program in diagnostics. If patients exhibit such disturbances on a weekday schedule, the fitness of the hospital as a teaching institution is enhanced.

When an event has useful consequences for one organizational goal, it is hard to recognize that it has dysfunctional implications for another. In this case, the disappearance and appearance of symptoms are conflicting means to compatible ends.

Mental illness is thought to be a personal malady. It is sometimes interpreted as a breakdown of the individual's participation in social life. But even if such disorders are of internal instigation and their manifestations deviate from accepted conduct, they may still come under social control. Until we acquire systematic knowledge of environments we will not appreciate how powerfully and pervasively they work.

Steps Towards Genuine Artificial Intelligence

A. V. Reader

There has been much interest in the field of artificial intelligence. Indeed, some psychologists and physiologists have looked to artificial intelligence for fresh inspiration in understanding the human intellect and brain.

What is artificial intelligence? Turing has devised a criterion by which a machine could be judged to be intelligent. This is a situation in which, behind a partition, there are a person and a machine, both communicating in code with a second person. The latter then has to distinguish which is the machine, using only the coded communications. If the machine fails this impersonation test, it would not be regarded as intelligent.

Conversation is only one aspect of behavior that is essentially human. Others are arithmetical manipulation, control of machinery, playing games, problem solving, and artistic creation. Computers have been used for doing arithmetic, playing chess, and some exploratory attempts at proving theorems. While these impersonations of human behavior do not prove that the machines are intelligent, an intelligent machine would have to be able to perform these tasks.

So far as is known, the range of tasks which the human intellect can master is open-ended, and a machine can never be proved to be intelligent by comparing its performance with that of the human intellect since the process would not terminate. All we can do is to satisfy ourselves as to a machine's credentials. Thus a machine must continue to sustain the impersonation of human intellectual ability.

The only way a machine can continue to impersonate the open-ended ability of the human intellect is by being open-ended, i.e., capable of learning. My objection to accepting the chess machine as intelligent is rooted in its ability to learn and continue to impersonate a human chess player. The chess machine uses some mechanical learning processes, such as varying weighting of strategies and values of board positions, but the total of the machine's performance does not satisfy Turing's test because it does not evolve sufficiently to maintain the impersonation. Although question-answering programs (conversational programs) and game-playing machines constitute efficient learning machines, implemented they do not seem to replicate animal behavior or explain it.

A new approach involves a study of the nature of machines which can learn, so as to isolate those features which make learning possible. A powerful learning machine might be built, once the principles of "mechanical" learning have been discovered in simple learning situations. Having produced a learning machine, it would then be possible to see how far a conjunction of good learning techniques and built-in attributes would go toward explaining the functions of the brains of intelligent animals and man.

Since learning by a machine can be judged by alterations in its behavior, it is essential not to be misled by in-

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herent technological usefulness of the machine's actions. Learning in an animal is a process through which the ability to perform some kind of response not originally in its repertoire is acquired. The stimulation of this process requires more profound thought than programming a machine to make a specific response.

Two measures can be used to evaluate the learning abilities of a machine. We may ask: "How many different things could it have learned if it had had different histories?" The more things a machine can learn, the more versatile it is and the more near its performance to that of the brain of an animal.

The second measure relates to efficiency of learning. This may be estimated by using the mean number of steps taken to learn each of the different things possible for the machine to learn. Of two equally versatile machines, the faster learner will be the more efficient, other things being equal.

Intelligent animals and man can learn in an informal manner to make the correct responses to instantaneous stimuli or sequences of stimuli. As a result, research has been directed toward a learning machine which could simulate this process. This problem has been formulated in machine terms as a device with a finite input and output symbol alphabet which could learn to reproduce a required output symbol (a sequence of output symbols being the response) on recognizing a sequence of input symbols (the stimulus) without any restriction on the length of these sequences or on the choice of symbols in them. This machine would receive one input symbol at each time instant and would produce one output symbol before the arrival of the next time instant. The output symbol would depend on the machine's recognition of the sequence of input symbols terminated by the most recent input symbol. The machine would be designed to try different output symbol sequences by means of an inhibiting signal received through a special binary input channel. This training signal would be sent to the machine from its environment whenever the last output symbol sequence was unsuitable. The training signal would be analogous to punishment (its absence, reward) in animal learning.

Some results from the new approach may be summarized as follows: learning in a machine only occurs as a result of the storage of input information. The versatility of a learning machine reaches a maximum only if all the input information is stored and it is reduced if stored information is destroyed or otherwise cannot be used. The efficiency of a learning machine is reduced if stored information is destroyed or otherwise cannot be used. The method of coding used for the information, or the way it is stored, need not affect either the versatility or the efficiency of the learning machine, but it is essential that the information be stored and retrieved in a consistent manner.

A simple machine which partly fulfils this objective will now be described. The structure of this machine contains a straightforward record of the input, output, and training symbol sequence. All information is stored and care is taken not to destroy any of it, or render it inaccessible. The rest of the machine provides for the loading of the next input symbol onto the record of events, for searching the

record for events similar to the present event, and for choosing the output symbol of the most similar past event as the next output symbol of the machine—unless the most similar past event was inhibited. In case of inhibition another output symbol may be chosen, for example, by sifting the memory for another alternative.

The criterion of similarity must be able to function in a valid manner, whatever the meaning of the input and output symbols. The present event and a typical past event are represented in binary form, and are compared by "superimposing" them and counting, in some predetermined order, through the past-present pairs of binary digits until the first unequal pair are found.

This machine is a member of a class the members of which use the criterion of similarity but have different methods of avoiding unsuitable earlier responses. A difficulty in fulfilling the objective is to guarantee that the machine will be able to find the correct responses. Variants of this machine can solve stimulus-response problems, but all have sometimes failed to solve a problem through being unable to try all possible sequences of output symbols, and by chance missing the correct response.

The machine can learn to recognize or respond to either instantaneous stimuli or sequential stimuli or a combination of both. This is because, as the memory increases in size with time, the degree of similarity tends to increase so that more and more digits describing the present event match the corresponding digits in the most similar past event. When two events agree to a sufficient number of digits, they must have the same meaning, so that the similarity criterion must eventually function correctly.

The fact that this machine has an artificially perfect memory, while the brain almost certainly has not, is not important at this stage, since the prime difficulty with learning theory is to present a logical learning system which is sufficiently versatile to account for the breadth of animal behavior and at the same time efficient enough to be able to account for the speed with which animals learn.

The machine is an idealization of the most obvious aspects of animal learning because it has been built to recognize and respond to any sequence of input symbols with any required sequence of output symbols. If input symbols were thought of as coming from a sensory system analogous to that of the sensory receptors of an animal, and the output symbols controlled devices analogous to the muscles of the animal, the input and output alphabets would have to be very large to provide for every possible pattern of sensory stimulation and muscular response. Learning under these conditions would be very slow because the similarity criterion would take a long time to cope with the large amounts of noisy and inessential input information, and there would be an extremely large number of patterns of muscular response to be tested.

But animals seem to recognize only some combinations (patterns) of their primitive sensory information and produce comparatively few classes of response (eating, fleeing, attacking, pursuing, resting, scratching, etc.). A robotic system might be capable of accounting for this. A "pattern recognizer" detects important features in the environment (movement, contrast,

sudden noise) and passes on to a "learning machine" a concise description of the sensory data. A "response generator" produces classes of organized response using primary sensory information and the outputs of the learning machine. The "inhibiting mechanism" (pain) is produced by part of the pattern recognizer, using information from the body of the robot as its source.

For example, if the robot were attacked, the pattern recognizer would detect the sudden movement, noise, and increasing proximity of a "predator." Information would be sent to the learning machine to invoke the learned response, and information would be sent to the response generator to set it to interpret the output signals of the learning machine. The output symbol of the learning machine goes to the response generator and causes it to produce a particular response from the small number of "in the presence of a predator" responses applicable in those circumstances. Examples could be: run away from the predator, attack the predator, or appease the predator. Each alternative requires detailed environmental information to control it, as well as information in the learning machine's output symbol. In order to run away, the visual system must communicate to the response generator the direction of the predator relative to the robot so that the robot can move in the opposite direction.

The pattern recognizer describes to the learning machine those aspects of the situation which matter to the robot, and the response generator interprets the output symbols of the learning machine with the aid of information coming from the pattern recognizer to produce responses which are likely to be useful. As a result, the input and output symbol alphabets can be small and the robot is able to learn quickly.

Two criticisms of this learning machine are, first, the memory becomes very large and the amount of computation to search the memory increases, and second, the criterion of similarity appears to be odd and inflexible. In reply to the first, we may say that the machine's ability to learn is in direct proportion to its ability to store information. It might be possible for the machine to erase records of its early life because when it is older it will have learned to keep within situations that it has mastered.

But it is difficult to see how search of all available memory can be avoided since the locations of the "similar" past events are not known in advance of the search. Such a total search is, in principle, not impossible in the brain, because it could conceivably be performed by a parallel computation in the required tenth of a second.

In reply to the second criticism, the alternative is to find a better criterion of similarity that will work when the information strings to be compared are irredundantly coded.

So far this treatment of mechanical learning has not referred to conditional reflexes. This will be the subject of research where I hope to show that by making a small addition to the robotic system, conditional reflex behavior can be elicited alongside avoidance learning.

The Athlete in Mental Health Work with Children

THOMAS S. WRIGHT and LESTER MANN

It often has been assumed that the handicapped child would not respond to physical training and did not have the same needs as the normal child. Yet the pioneers in special education emphasized physical training and athletics. In recent years, there has been an emphasis on the need for physical education of the handicapped. Adaptive physical education programs have been introduced in public schools and in some States are mandated by law.

The Buttonwood Farms-Temple University program was inaugurated to train physical education-recreation specialists for roles as mental health resource personnel and to serve as members of the mental health team. The program, now in its fifth year, consists of two components, the Buttonwood Farms Saturday Recreation Program and the College Professors' Seminar.

The Saturday Recreation Program provides training to 12 graduate physical education students every year. During the summer, the trainees take part in the Buttonwood Farms day and residential camp programs for emotionally disturbed children, where they participate in field experiences, including clinical demonstrations by psychiatrists, pediatricians, psychologists, and specialists in education and rehabilitation. They also receive formal lectures from these specialists and others from social work, occupational therapy, and other disciplines. During the school year, they participate in weekend recreation programs, where they attend conferences with a child psychiatrist, are supervised by a clinical psychologist, and receive individual counseling by a psychiatric social worker. Throughout the year contact with parents is made available to them to increase their understanding of emotionally disturbed children. They receive training in physical education-recreation techniques at Temple University's Department of Health, Physical Education and Recreation.

By the end of training, these personnel are trained to work in programs providing physical recreation services to emotionally disturbed children, and to establish, direct, and manage programs of their own.

The College Professors' Seminar is a summer program which trains eight college professors a year, half of them with doctorates and half at the postmaster's level. The participants are trained at Buttonwood Farms' camp installations. There they observe the technician-trainees and are given instructions, clinical demonstrations, and consultations with Temple and Buttonwood Farms staff and consultants. They develop specialized materials and curricula tailored to their own universities' or colleges' needs, as well as those usable by institutions providing instruction in health, physical education and recreation.

Four out of five participants in the pilot phase reported that they had installed instructional programs directed to the needs of emotionally disturbed children at their universities or colleges.

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Handicaps tend to isolate children and impoverish their learning experiences in social relations. Most handicapped children lack physical conditioning, physical recreational skills, and sports skills. Finally, the handicapped child suffers from lack of ego-identity and marked feelings of inadequacy and inferiority.

Why should the athlete be involved? What does he have to offer that is unique? He is oriented to the use of the body in a way that the other professionals are not. He does not become involved with emotional conflicts which, though they must be recognized in a mental health clinic or a psychiatrist's office, may get in the way of physical education and recreational training. The athlete's commitment to excellence in physical education recreation programs makes him an ideal person for them.

The second reason is modeling behavior. Anyone who sees a mentally retarded child clutching a list of baseball averages to his bosom knows how important sports figures can be and that he will work hard for people who represent this endeavor. The athlete is not a person who will teach him or treat him medically. He is viewed by the child as one who can help him become more competent.

The athlete's striving to overcome obstacles makes him urge the child to override his limitations to the point of accomplishing goals that would appear impossible. The athlete is dedicated to using his physical skills to achieve his goals. Learning a skill as an end in itself can be a frustrating task for a child. He wants to see what is accomplished by learning it. Doing exercises is not gratifying. But when he can envision himself being able to score a touchdown, his orientation toward learning becomes vitalized in a unique way.

More important than physical development is the tremendous sense of accomplishment the child receives from sports achievement. The slightest triumph is a major one for the handicapped, and the gratification the parents receive from observing it cannot be exaggerated. The whole orientation of the child toward himself and of his parents toward him is changed by such accomplishment.

What are some negative aspects of having an athlete train the handicapped child? His emphasis on excellence can make him too impatient. He may drive the children too hard and too far. Because of this, it is necessary that he work with professionals. He must recognize that a mental health goal can be contrary to a physical development goal, but valid in its own right. For example, a psychiatrist may want to see a child learn to play baseball, when the athlete knows that kickball would be a suitable sport. The psychiatrist may know, however, that to the child, having played in the baseball game, no matter how poorly, constitutes a major experience.

The athlete may become impatient over repetitive training of what seem to be simple points. His frustration may communicate itself to the children with whom he is working. The athlete has to learn to lower his own expectations because of the children's limitations. Athletes are often impatient when working with other professionals and arrogant in terms of communication. If these attributes can be averted, the athlete can be a major contributor to rehabilitation programs.

A Self-Regulation Technique for Impulse Control Disorders

ALLEN E. BERGIN

Many clinicians know that increasing numbers of clients are seeking treatment for problems of impulse control, such as aggression and violence, sexual excesses and perversions, alcoholism, drug addiction, and garden variety difficulties, e.g., overeating and smoking. There has been a lag in developing techniques designed to treat this form of pathology. Our approach is one response to the technical vacuum in this area. It also arises from a recognition that one great need is for specificity that is, the application of specific techniques to specific problems under specifiable conditions which lead to predictable differential outcomes.

Our method is designed specifically to deal with impulse disorders from a *self* control frame of reference. It is assumed that deficiencies in self-regulation are not due to psychodynamic or conditioning processes, but to an absence or a breakdown in the individual's conscious self-regulatory ability. The technique centers around a diagnostic evaluation of the precise conditions under which self-control is deficient and training the client in methods of conscious self-control.

A Case Study

Mr. A sought help in overcoming compulsive homosexual fantasies and behavior. He was seen for 20 sessions totalling 35 hours over a six-month period. His behavior had a compulsive quality of great intensity which provided satisfaction during the act itself but he invariably found it disgusting afterwards. His fear of heterosexual intimacy was an important contributing factor to the development of his problem.

The technique involved an assessment of the events preceding the arousal and consummation of a sexual impulse. This analysis revealed that a consistent pattern of events led to each occasion. Persistent focusing on the preimpulsive time period was necessary before these events became clear and a logical interpretation of the disturbing behavior became possible.

The analysis yielded a striking view of what was happening during these periods of compulsive, unwanted consummation. There seemed to be a spiraling sequence of stimuli and reactions which became impossible to control. I call this phenomenon an impulse-response chain, analogous to stimulus-response chains in learning.

How the chain proceeded is: S (male person in public place)→R (glance toward person)—S (return of glance)→R (mild emotion and fantasy plus additional glance)—S (establishment of visual contact)→R (intensified emotion and fantasy plus movement toward person)—S (physical proximity)→R (heightened desire)—S (heightened desire)→R (verbal exchange)—S (verbal exchange)→R (interpersonal engagement—S→(interpersonal engagement)→R (intense feelings, memories and fantasies)—S (feelings, memories, and fantasies)→R (physical involvement)—S (body contact)→R (consummatory behavior).

Condensed with permission from *Psychotherapy: Theory, Research and Practice*, 6(2):113-118, 1969.

After laborious efforts had identified sequences of this type, the client was encouraged to interrupt any impulse-response chain as soon as he became conscious of its presence. Failures often occurred because the effort to control was applied when the impulsive pattern had reached a high level of intensity. The undeveloped control ability was weak relative to the strength of the impulse, and it had to be applied early in the sequence to insure success. The client was instructed to pay close attention to environmental situations and personal reactions that might set off the undesired chain of events.

Techniques for interrupting responses to stimuli early in the chains were discussed and, in imagination, practiced during the sessions. These included methods such as immediately switching to thoughts or activities unrelated to the chain; it was emphasized that this be done promptly so as to apply the greatest strength of control to the weakest strength of impulse. This procedure of shutting off impulse-related reactions and immediately engaging in another activity (reading, walking, thinking, etc.) was a simple act of will motivated by the client's desire for change and by the hope and compliance engendered by the therapist's instructions.

Following this procedure was difficult at first. He reported his experience in much the same terms that addicts do—as a feeling of climbing a steep hill with a large pack on his back. Unexpectedly he seemed to reach a crest and the effort was then easy the rest of the way.

The client was able to control his homosexual behavior during the entire second half of therapy (10 sessions covering three months) and found it increasingly easy to do so. He was followed-up and was found to be free of this problem over a two-year period. At about one year after therapy he was married and the marriage appears to be continuing successfully.

The client reported occasions in which he was confronted by the stimuli which had previously initiated the impulse-response chain. At first he tended to react to them and found this upsetting, but as he continued to control his behavior, these reactions weakened and he eventually found himself totally unresponsive to them.

The potency of this technique seems to lie in applying it to a specific problem which arises from an inadequately developed self-regulatory system. The emphasis is on the assumption that there are such things as primary developmental defects in self-control which are responsive to techniques that emphasize the self in self-control; namely that the defect lies in the unpracticed will, in the self that does not consciously and vigorously regulate.

Many processes took place during therapy in addition to the dominant one described in this paper; therefore this material merely illustrates the technique. Controlled comparisons would be required to determine the exact contribution of this technique independent of the effects of self-exploration, of desensitizing processes, of changes in self-perception and in construing the world, etc.

A Comparison of Personality Characteristics of Mennonites with Non-Mennonites

IRMGARD THIESSEN, MORGAN W. WRIGHT, and GEORGE C. SISLER

This study is the first in a series of investigations of the relationship between the value system of the Mennonities in Manitoba and the types of symptoms developed at the time of mental illness, the subsequent course of the illness, and the pattern of recovery.

The Mennonite group was selected because it has attempted to maintain its cultural identity despite the social pressures to conform to the society surrounding it. The term "Mennonite psychosis" has been used by psychiatrists to describe a particular complex of symptoms which this group appears to develop when mentally ill. This is a schizoaffective disturbance characterized by depressed affect, strong feelings of guilt, delusions of persecution, and emotional detachment. It has further been assumed that the nature of the "Mennonite psychosis" is at least partially a result of the influence of rigid standards and inflexible beliefs that make the Mennonite patient particularly vulnerable to feelings of sinfulness and self-condemnations.

First it was considered important to attempt an objective assessment of the value system of a sample of healthy Mennonites in the community. If it could be demonstrated that Mennonite young people have a tendency toward greater self-blame than non-Mennonites because of their moral standards, then such differences could be examined in relationship to mental illness. If it can be demonstrated that a given cultural group has a value system differing from the norm of the larger cultural environment, it would be important to take this into consideration in the treatment of its mentally ill.

The Mennonite group comprised 104 urban and 100 rural Mennonites. The urban Mennonite group included students drawn from two Bible Colleges, one representing a somewhat more, and another, a somewhat less orthodox Mennonite outlook. The rural Mennonite subjects came from a rural Bible School and an older group drawn from a Mennonite farm community. The control group of 199 urban non-Mennonite subjects included students from a nursing school, a physiotherapy school, a technical training school, and from a Teacher's College.

The urban Mennonite and control groups were similar in terms of age, educational level, and intelligence, whereas the rural Mennonite group was less well educated, and achieved a lower intelligence rating.

A battery of five psychological tests was administered: Otis Test of Mental Ability, Edwards Personal Preference (EPPS), George Washington Social Intelligence Test, and two projective tests, the Incomplete Sentences Test and the Thematic Apperception Test (TAT).

The Incomplete Sentences Test was devised to include incomplete sentences that might relate to values and religion. From 67 incomplete sen-

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tences, 19 were selected for analysis. Twelve incomplete sentences were neutral with respect to evoking religious or cultural responses. The remaining items were directed toward the need for a religious value system, guilt with respect to religious value standards, perceiving the father as omnipotent and patriarchal, and feeling uncomfortable in the presence of the minister.

Seven cards from the Thematic Apperception Test were employed. All responses were analyzed for guilt, punishment, religious, and violence themes.

City Mennonites made significantly more religious responses to 12 general items of the Incomplete Sentences Test, as well as to those evoking guilt with respect to religious standards. More City Mennonites indicated insecurity in the presence of ministers, and experienced the fatherly authority as patriarchal and domineering than did the Control subjects. They expressed a stronger need for a religious value system and viewed sex more in a religious context. With respect to the TAT, the City Mennonites wrote stories involving significantly more religious themes, punishment for wrong doing, and guilt with respect to wrong doing.

Of 15 variables from the EPPS, four showed differences between the Mennonite male group and the Control group. Mennonite men indicated a greater need to be of assistance to others (nurturance), to defer to the opinions of others (deference), to feel guilty when things go wrong (abasement), and to feel less need to engage in heterosexual activity. City female Mennonites showed a greater need to feel guilty for wrong doing and also less interest in association with the opposite sex than the female Control group.

No differences were found between City Mennonite subjects and Control subjects on the Social Intelligence Test. This would suggest that at least in a hypothetical social situation the City Mennonite subjects were as able as the Control subjects to make the appropriate conventional response.

On the TAT City Mennonites more frequently give themes involving punishment and guilt. The EPPS test yielded three of 30 variables which discriminate between the rural and City Mennonites. City female Mennonites showed less need to feel guilty than did rural Mennonites, and were inclined to be more dominant. Male City Mennonites expressed more dominance than rural Mennonites.

There is little doubt that the Mennonite group does perceive its relationship to the environment in different terms from the non-Mennonite group. It can be said that they are more moral or more guilt ridden, have a greater feeling of responsibility to their community, or are more inflexible and rigid in their response to authority figures and concepts.

It is not apparent to what extent this is mentally healthy or unhealthy. From the psychological point of view it can be argued that there are both strengths and weaknesses in the absolute value system of the Mennonite community as compared to the non-Mennonite. To the extent that the Mennonite has faith in his religious values, then to this extent he is free from the anxiety of having to search for answers himself. However, as anxiety may be held in check by a conviction with respect to absolute values, so the possibility of guilt increases as one fails to measure up to such values.

Sympatho-Adrenomedullary Activity, Diuresis, and Emotional Reactions During Visual Sexual Stimulation in Human Females and Males

LENNART LEVI

The object of this study was to determine whether experimentally induced sexual arousal is accompanied by changes in sympatho-adrenomedullary activity, whether changes in catecholamine excretion during sexual arousal bear any relation to the intensity of the arousal, and whether females and males react differently.

The subjects were healthy students: 53 females (mean age 24) and 50 males (mean age 27). All males and 10 of the females were medical students. The remaining 43 females were physiotherapy students. All subjects were informed about the stimuli to which they would be exposed and that the intention was to study reactions to such stimuli. The recruitment of subjects resulted in a sample that is highly selected, in view of their familiarity with looking at and handling the naked body. This bias must be considered in drawing conclusions.

The subjects were shown four films depicting openly and realistically the shape and function of human sex organs in intercourse. Urine samples were collected at the end of three consecutive 90-minute periods, one preceding the film showing (Control Period I.), one including the 72-minute film program (Film Period.), and one after the films (Control Period II.). Subjective reactions were reported on self-rating scales administered toward the end of each period. Some months after the experiment, each subject was asked (by letter) about his or her sex life.

Condensed with permission from *Psychosomatic Medicine*, 31(3):251-268, 1969.

Physiological Variables

Adrenalin excretion—The adrenalin excretion of the males increased markedly during the film period. The increase in the female group, although equally significant, was markedly smaller. Excretion levels of males were significantly higher than those of females throughout.

Noradrenalin excretion—Noradrenalin excretion increased markedly and significantly during the film in both groups. During the second control period, the noradrenalin excretion of the females returned to the level of the first control period. During the film period and second control period, the excretion level was significantly higher in the male group.

Urine volume—There was a marked increase in urine flow during the film period in both groups, and a marked and significant decrease from the first to the second control period, though this was significantly more pronounced in the female group.

Specific gravity—Urinary specific gravity decreased markedly during the film period in both sexes.

Urinary creatinine—Urinary creatinine excretion of the male group did not change significantly, but the females showed a significant decrease in creatinine excretion from the first to the second control period.

Psychological Variables

Sexual arousal—The film period was accompanied by a significant increase in mean self-rated sexual arousal in both sexes. Twenty-one percent of the females and only 4 percent of the males reported a total absence of sexual arousal. At the higher levels of arousal, the males increase and the females decrease in frequency, while at the extreme of sexual excitation we find a few females but no males. The mean level of sexual arousal is higher in the male group than in the female during the film period but not during the control periods. This sex difference also applies to the increase in sexual arousal that is reported to have occurred during the film showing, as compared with the control periods.

Pleasurable sensations—Both groups reported significant increase in "pleasurable sensations" during the film period, the increase as well as the mean level being significantly higher in the male group.

Unpleasant sensations—A small increase in "unpleasant sensations" was also reported by both sexes during the film period, the mean level but not the change being significantly higher in the female group.

Anxiety and uneasiness, emotional upset—The mean scores of "anxiety, uneasiness" increased moderately in both sexes during the film period, the increase reaching significance in the male but not in the female group, reflecting the fact that the mean score was higher in the females before the film period. The scores for "emotional upset" increased slightly but significantly during the film period in both groups.

Anticipation, general emotional arousal—The mean "anticipation" scores were significantly higher in the males before and during the films. Anticipation increased significantly in both groups during the film period, the increase being more pronounced in the male group. In their overall assessment of "emotional arousal," both groups reported significant but similar increases during the film period, the female group being slightly but significantly more aroused during the first control period—i.e. prior to the film.

Sexual experience—The male group were sexually somewhat more experienced than the female.

Sexual Arousal and Increased Catecholamine Excretion

During the film period, there was a rise in urinary excretion of adrenalin and noradrenalin in both sexes, probably reflecting an increase in sympatho-adrenomedullary function. It is probable that the sexual arousal evoked by the experimental stimulus is the main factor behind the increase in catecholamine excretion in both groups during the film showing. Nevertheless, the part played by other emotional reactions could have been understated by the subjects, and hence cannot be ruled out with certainty. The decrease in adrenalin excretion from the first to the second control period probably is due to diurnal variation.

Relationship Between Sexual Arousal and Sympatho-Adrenomedullary Activity

Our next problem concerns the quantitative relationship between sexual arousal and sympatho-adrenomedullary activity. Neither function was accessible for direct measurement. The psychological reactions were presumably of a composite character and

difficult to report even for sophisticated subjects. Such reports are influenced by disinclination or inability to report reactions that are taboo or socially controversial. Also, the subjects may have presumed that they were expected to react with sexual arousal. Neither can it be taken for granted that urinary excretion of free catecholamines is a simple function of the total release of these hormones during the period of urine collection, even if this release is probably the major determinant of the amount excreted.

Against this background, it is unlikely that the correlation between these variables would be high. Taking the correlation in the female group between the changes in catecholamine excretion and sexual arousal during the film period in relation to the mean of the control periods, we found that $r=.27$ for adrenalin, as well as for noradrenalin.

The correlation coefficients in the male group were considerably lower. The reason for this sex difference is not known. It is possible that the females gave more honest and reliable reports of their reactions than did the males.

Sex Differences in the Capacity to React to Visual Sexual Stimulation

Although some females are more responsive than any of the men, in general, they reacted less than the males.

Sexual Arousal and Renal Function

The fact that urine flow of females was higher and specific gravity lower than that of the males is probably a reflection of the females' higher intake of fluid/kilogram body weight. One still must explain the sex differences in antidiuretic reaction from the first to the second control period. This might be partly due to an effect on renal hemodynamics of the catecholamines and of the antidiuretic hormone, the release of which is probably elevated during sexual excitation.

The change in creatinine excretion between the two control periods is also significantly different in the two sexes, probably reflecting corresponding changes in glomerular filtration.

Nonsexual Psychological Reactions

The males' slightly higher scores of pleasurable feelings and slightly lower scores of unpleasurable ones are in accordance with the Kinsey hypothesis that men are more prone to sexual arousal from visual stimuli than women. The higher anticipation ratings in the male group probably reflect the same general trend. Anxiety, uneasiness and emotional arousal ratings were similar in both groups. This runs counter to the assumption that young females are disturbed more easily by the type stimuli applied here than young males.

Schizophrenic Thinking: A Role-Theoretical Analysis

THEODORE R. SARBIN

Many papers and books have been written about the language and thought disorders associated with schizophrenia, and an implicit causal line is drawn: that illogical thought is caused by a disease entity called schizophrenia.

I shall argue for an alternate strategy of research by demonstrating the feasibility of looking at this dependent variable (language and thought) in another way. Many language and thought defects noted in hospitalized schizophrenics are products of describable social events associated with labeling a person as mentally ill and with the attendant instrumental acts and rituals carried out by medical, legal, and other personnel.

To advance this analysis, we recognize six sequences in the career of the mental patient. On a time dimension these might be labeled as remote ecological events, postulated genetic and constitutional events, prepatient role, unsettled patient role, stabilized patient role, and post-hospital patient role. The usual experiment compares performances of persons in the stabilized patient role with nonpatients. If differences are found, they are related to remote ecological events drawn from retrospective accounts. Thus, thought disorders are related to such events as having a schizophrenigenic mother, death of one parent before age 19, disorganized family, etc., or such genetic and constitutional events as having a lunatic great-grandfather, or being mesomorphic in body build. Without denying the importance of these events, I want to show how the prepatient and unsettled patient roles may yield more appropriate antecedent variables.

At this point it would be helpful to present a model of behavior that has proven useful for understanding disordered (and ordered) conduct. Components I and II comprise the world of occurrences: Component I is the set of distal ecologies, including the social ecology. Component II is the proximal (or somatic) ecology. These components provide the stimuli for the extraction of inputs that may have cue properties.

Component III is the sensory input. If the input is aligned or matched with a structure of the cognitive organization—belief, value, bit of knowledge—the input (Component IV) is given "meaning," i.e., the input is an instance of a class of objects and events, hence, the term "Instantiation." If the input is ambiguous, unclear, or insufficient, or if no matching cognitive structure is activated, the input is not instantiated. Here, an assumption is introduced: Human beings seek optimal ranges of tension, strain, and activation. When inputs are not instantiated, the person engages in increased cognitive activity by searching the ecology for additional inputs and reviewing a catalog of concepts against which to match the noninstantiable input. This is the condition of cognitive strain (Component V). Cognitive strain may be of such intensity as to "spill over" into physiological activation. Under some conditions (sometimes called anxiety states)

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the sensory input component is heavily weighted with feedback inputs. Degrees of strain outside the current optimal range lead to adaptive conduct designed to reduce (or increase) the cognitive strain (Component VI).

An important feature is the inclusion of distal as well as proximate effects of adaptive efforts. Not only may the adaptive maneuver be successful or unsuccessful in reducing cognitive strain, but it may serve as an event to be judged by relevant audiences. Such audiences have the potential for providing reinforcements to acts performed in the interest of strain-reduction (Component VII). The reinforcing acts of others become a part of the social ecology and may be regarded as the beginning of a new sequence of conduct (Component I).

For persons who are hospitalized and classified as schizophrenic, attention deployment is the primary adaptive technique. In a social ecology that provides noninstantiable inputs, strain may be reduced through attending to inputs that are instantiable—although not necessarily of interest to others. This maneuver is "withdrawal." The effect is to allow oneself to focus on fantasy creations—where the input can be matched with cognitive structures of unknown validity.

But it is not until the audience of relevant others declares a valuation on the effects of attention redeployment that conditions are set for assigning the person the role of prepatient.

Prior to this time, the person has been enacting whatever social roles he has been assigned by his membership in age, sex, occupational, family, and other groups. Only when his role-enactments are judged as invalid are the conditions present for considering them a part of the prepatient role. However, relevant others—family, relatives, friends, neighbors, clergymen, teachers—may change the picture through modifying their own role behaviors, thereby modifying inputs, or adding inputs from the social ecology that are instantiable. If the efforts are successful, the dependency upon an autistic community may be broken.

But the relevant others may not be successful or may not recognize the invalidity of the role-enactments of the distressed person. When the actor's invalid role performances create disturbances in his social group, a condition similar to social anomie is found. If the group has no resources for modifying the stress-producing ecology, they look to institutions. But before he is inducted into the role of inpatient, there is a period where he plays, sometimes unwittingly, the prepatient role.

The prepatient role is a variant of the sick role. It carries with it minimal social obligations. At the same time that the actor is considered sick by his family and associates, there is an obligation on them, or on their surrogates—social workers, physicians, police, etc., to see that the sickness is attended to. The resource for sickness is the physician. In serving his patient, the physician will practice his craft as best he can to find that his patient is not sick in the usual sense. However, the actor's performances allow the physician to offer a diagnosis of mental illness.

The prepatient role is not easily enacted. The audience must induct him into the niceties of the role of mental patient. If he accepts this role, then he must learn the appropriate behaviors. If the patient puts up a fight, the

audiences use such resistance to reinforce their belief that the patient mentally is ill. The wheels of medicine and law turn and the person finds himself in a locked ward.

The unsettled patient role is characterized by the further stripping away of the patient's usual roles. He is locked up for observation. He is subject to procedures where a judge "commits" him to a mental hospital. His civil rights are taken away and so are his claims to being a person, of having a self. There is no need here to detail the mortifications practiced on the new patient to convince him that he is sick and that his proper performance of the sick role is required before he can achieve a state of health and grace. The large numbers of patients and the small staff create a climate in which administration of the hospital can only be carried out through the cooperation of the patient. This calls for docility, submissiveness, and abasement. The ecology of the mental hospital produces even more noninstantiable inputs. Since instrumental acts designed to right the threatening conditions are not tolerated and since other forms of adaptation are in short supply or proscribed, the patient may find himself seeking out and responding to inputs that are classifiable, given his structure of knowledge. These inputs, of course, are generated in his autistic community, his fantasy ecology.

My next task is to show how these social psychological events are the bases for cognitive changes that are observed in the analysis of language and thought samples.

Cognitive work carried on in private—by the scientist, the man in the street, or the person labeled schizophrenic—is characterized by shortcutting devices. For example, in working out a theory, the scientist does not utter complete propositions and syllogisms; he uses shorthand forms and makes use of assumptions. Perhaps the most frequently used shortcut is the truncated syllogism or enthymeme. This is a syllogism in which one of the premises, usually the major, is tacit, silent, hidden, assumed, or disguised.

In public discourse, the speaker must be ready to make explicit his tacit or hidden premises. Thus, when a person cogitates about the ecology with a real or imagined social community as an audience, he either announces his major premises or is ready to formulate them if challenged. Now take the case of the withdrawn person engaged in silent syllogizing. He too uses shortcuts, but is under no pressure to make explicit his major premises.

This sketch of enthymematic thought is applicable not only to the initial stages of the withdrawal and to the prepatient stage, but also to the desocialization that follows the assignment of the person to the role of the mentally ill person.

So when the investigator compares the cognitive behavior of schizophrenics and nonschizophrenics and discovers differences, the problem becomes one of identifying the correct antecedent conditions. The disease model asserts that the differences are symptoms of an underlying disease, either organic, psychic or both. The social role model asserts that the differences are cognitive effects of social withdrawal and desocialization.

A Theory and Practice of Humanistic Psychotherapy

Roy D. Waldman

My purpose is to suggest a format by which the humanistic dimension may be established as central rather than incidental to both theory and practice of psychotherapy.

Theory of Neuroses

Neurotic conduct narrows the scope of existence, excluding the patient from participating in broader and more meaningful spheres of life. The question for the humanistic therapist is crucial: Is the neurotic symptom a natural phenomenon, accidental to the human situation, a product of causes? Or, is neurotic conduct a purposeful, meaningful reply to a crisis situation?

I shall attempt to support the latter contention. The neurotic creates his symptom to enhance his withdrawal from his experience of existence as being excessively harsh. Indulgence in symptoms allows him to put his foot forward into the game of life on a conditional basis. The utilization of symptoms represents a maneuver by which the patient protects his self-esteem; he seeks to withdraw from responsibilities and to gain recognition and approval for his retreat.

But no individual may avoid the tasks and decisions inherent in the human situation. Neurotic tactics represent a decision—unwittingly—of withdrawal. What is the price of deciding to remain spectator to the significant issues of his life? If decisions and actions have little relevance to the central sphere of existence, one must seek a sense of value, purpose, and meaning through subsidiary activities. A subsidiary existence, however, often endangers one's sense of worth and value—without which man cannot exist. In order that he quell the sense of anxiety as well as redeem his sense of worth, the neurotic thrusts himself upon people and objects within his own immediate circle.

The precariousness of his situation makes it necessary that he obtain self-esteem by tactics of power, coercion, and manipulation. Coercive strategies are most likely fostered in a social structure in which action possibilities are constricted, and the maintenance of self-esteem has become more tenuous. To confront the problem of neurotic tactics one must consider elements in the social structure that encourage and promote coercive or manipulative behavior.

The suprastructure or symptom is not intended to conceal underlying complexes or aberrant instincts, but to permit and justify the neurotic to sustain his mode of retreat from the demands of existence. The neurotic's plan of action underlies all his feelings, thoughts, and ideas. It is this mode of existence that has been referred to as the infrastructure of neurosis.

The neurotic is convinced that he must act as if he were powerless to be free. He believes himself powerless to tolerate the risk of becoming engaged in autonomous action based on intelligent self-reflecting decision with its consequent responsibilities. What are the origins and consequences of such conduct?

Condensed with permission from the *Journal of Individual Psychology*, 25(1): 19-31, 1969.

The tragedy of man is that as a child he is unknowingly coerced and duped into accepting and maintaining a role of weakness which often has the effect of bolstering the self-esteem and righteousness of those with whom he is in close association, to the detriment of his own self image. The child is moulded and maintained in a position of inferiority beyond the necessities of nature. He learns to base his pride on allowing others to decide for him. Only with perseverance and effort may it be possible for him to outlive his humiliating past. The availability of more meaningful alternatives as an adult may become apparent to him during the process of psychotherapy.

The neurotic condition epitomizes the man who believes that it is only the "Other" who may decide and choose. The neurotic individual represents the embodiment of one who has had his freedom stolen from him. His actions indicate that he has been duped into believing that it is only the "Other" who may bestow upon him a sense of worth.

To cope with this situation he seeks recognition before rather than after his actions. Yet in spite of pretense, alleged weakness, and apparent deference to the "Other" he cannot avoid interest in his being. I submit that it is the ramifications and consequences of this position of powerlessness that remains unadmissable or unconscious. Symptoms plague the patient to accommodate him better to his experience of reality as excessively harsh and limiting.

Practice of Psychotherapy

The basic supposition of a humanistic psychotherapy is that free choice is a possibility for all. Man does not have to be tomorrow what he is today. Humanistic psychotherapy cannot offer man a new way of life, only a direction toward which he must strive. It can allow the patient the opportunity to examine the meaning of his life as he is living it and give consideration to alternative modes of living.

A major task of therapy is to enlighten the patient as to whether or not his actions are based on free involvement. The pursuit of the ways of depression, anxiety, anger, and so forth indicates that the patient is unwilling to embark upon alternatives. Psychotherapy must hold at least the promise that the risk of freedom is more fruitful than its avoidance. The choice that presents itself during therapy is one between cowardliness and courage, hesitancy and decisiveness—a difficult one to act upon.

One who acts helpless becomes helpless. He has not only become helpless but has staked his pride and meaning on helplessness. Resistance becomes the means by which the patient persists in helplessness, to avoid the unfamiliarity and anguish of freedom. By clinging to his symptoms the patient seeks to justify his powerlessness and thereby postpone the task of accepting the risks and unfamiliarity of freedom and responsibility.

Intervention and coercion communicate to the patient his incapacity for self-reliance. Instruction, advice, and counseling on how to live one's life are often denigrating, and antithetical to self-liberation. If the therapist is not to coerce the patient, he is left with the arduous alternative of attempting to influence him to become what he can.

The therapist must realize that the material brought forth by the patient is a product of their relationship. The therapist is not a passive agent who

allows the patient to catharse. Caution must be exercised that the therapist does not become a parental surrogate. Intervention, imposition, and control would give a basis to an antagonism that would become a distraction for the patient from the scrutiny of his life, as he is enticed into a preoccupation with the therapist.

The effectiveness of the therapist is a measure of his inclination to exercise carefulness rather than care. He must offer assistance rather than his self; he ought to be concerned rather than attempt to control.

To minimize intervention a contractual model of therapy has been proposed. The contract becomes the ground rules on which therapy is conducted. It provides verbal agreement to insure that the therapist neither dominate nor be dominated by his patient. Therapy becomes a means toward the liberation of the patient only if the liberty of the therapist is given equal consideration.

If neurosis is a renunciation of man's responsibility to be free, the psychotherapeutic contract serves to redirect the patient toward the path of liberation. Adherence to the contract accentuates the therapist's efforts as well as bringing to the patient's awareness his tactics that delay and postpone his quest for freedom.

Failure of therapy may stem from inadequate or insufficient information imparted to the patient. The therapist may lack competence as an educator or serve as an ineffective model and impede the patient in his effort to seek alternative modes of conduct. The patient's understanding of his life situation may arise from the verbal communications of the therapist, and more importantly, from his actions and conduct within the therapeutic setting: the instructor is more significant than the instruction.

The patient must be willing to explore the meaning and purpose of his symptoms. The patient's way of life rather than the symptom becomes the focus of therapy. This concept distinguishes the medical from the psychological symptom: the medical symptom refers to an organ, the psychological symptom to the organism —man.

The patient becomes aware of the significance of his symptom if he is willing to look beyond it—not to its cause, but to its meaning. The more profound the patient's preoccupation with the symptom the more difficult it will be to resolve.

It becomes an essential task of therapy to clarify for the patient the details of his life plan. He must realize that his way of life conflicts with reality; and at the same time he becomes aware that his symptom enables him to maintain self-esteem while concealing his unproductive life plan. Only this realization will tempt the patient to seek new avenues of conduct, to redefine himself and create for himself new choices. Once he has seized upon this realization, two alternatives arise: he may remain committed to his pseudo-secure old ways, or meet the risk and challenge of recouping and exercising the power that he has forfeited. Essential to a recouping of this power is that he no longer be afraid to err: he must ground his self-image on deed rather than retreat. Only then will he be prepared to accept the risk of choice, responsibility, and greater freedom.

Music Composition in a Music Therapy Program

Joseph A. Castellano

Because most patients do not have music training, there is an area in music therapy that has been neglected —the area of composition.

A method of teaching composition, regardless of knowledge of music, has been reported by Watkins.[1] It avoids technical explanations and emphasizes a few basic characteristics of a melody or tone cluster. The technique is initiated visually, and students immediately begin to write simple melodies. The method incorporates: melodic skips and steps; keytone, the frequent repetition of a tone to create tonal order; polyphony, two parallel melodies that may or may not imitate each other; accidentals, the manipulation of "tension characteristics of natural intervals," dissonance and consonance, the conflicting or harmonious sound of two or more tones; and tone clusters, a group or cluster of tones that may be dissonant or consonant. Whole notes and half notes are used at first, and time signatures and bar lines may be delayed or completely omitted.

This technique has been used with psychiatric patients at the Georgia Mental Health Institute, and early results have been impressive.

The success is exemplified by a male patient who has participated only in record-listening groups and chorus. In the composition class, he wrote an alma mater for the Institute, including text and music. His artistic creative qualities were not evident before this class.

The class seemed to spark a creative urge toward the expression of feelings in writing, and many patients who had never written experimented with ideas of their own, in words as well as music.

Another result has been the opportunity to observe pathological thinking. In each class one patient consistently attempts to write something different from the group. This nonconformity becomes progressively more obvious in the compositions, and usually members of the class point this out to the individual. The group often supports or instructs an individual who is having difficulty comprehending the material and spontaneously verbalizes approval of his compositions, thus giving him a greater sense of self-esteem and confidence. The group is also effective in dealing with reality testing. One patient may make derogatory remarks about his compositions, and another may be carried away by grandiosity about his future in the field of composition. The group is effective in pointing out to the first patient that he can write well and expressing nonverbal disapproval to the latter. This also may provide an opportunity for the music therapist to discuss realistic goals with the group.

The use of this technique has proven to be adaptable to music therapy patient groups. The patients' enthusiasm for the class provides evidence of its future use in music therapy programs.

Condensed with permission from the *Journal of Music Therapy*, 6(1):12-14, 1969.

[1] Armin Watkins, "Music Composition by the Non-Professional." *The Music Director* including *The Florida Music Teacher*, 1966, 19, pp. 3-4.

Psychiatric Aspects of Thermal Burns

GEORGE C. D. KJAER

Burned patients are never normal. Under bandages, disfigurement, and odor, there is fear, confusion, guilt, uncertainty and misunderstanding. The trauma is there in some degree, in every patient and it is apparent to those who are aware that it exists.

Pre-burn factors—Some burns may be the result of maladjustments developed before the patient is brought to the hospital. Failure to avoid hazardous situations can be charged to failing intellect, poor judgment, neurotic self-destruction patterns of behavior, or psychosis involving self destruction. Alcoholism can not only create a pathway to "accident" but can complicate treatment. Pre-burn factors leading to suicide attempts are apt to become prominent during recovery.

Factors arising from the episode—Terror stamps itself into the minds of those attacked by flame, but there are other factors that arise at the time of the injury. No one would have predicted post-burn tranquility of a patient whose wife poured boiling water on him, or a child whose mother immersed him in hot water. Another type of parent, frustrated in an attempt to rescue a child, may be overcome with grief, remorse, and guilt, making his recovery anything but smooth. Guilt may also arise from the fact of survival when others have been injured or killed. This phenomenon has been noted also in survivors of prison and concentration camps.

Condensed with permission from *Northwest Medicine*, 68(6):537-541, 1969.

Organic factors—Not all psychologic symptoms arise from psychic mechanisms. The stress involved in a burn may induce reaction in the adrenals that causes cerebral edema and renal problems. Thirty percent will develop stress ulcers. Septicemia can tax the limits of chemotherapeutic agents and antibiotics. Fever may dull the patient's intellect, sometimes inducing delirium. Several symptom-producing syndromes have been identified: anoxia, hyperemia, hyperkalemia, and dehydration. Thermal burns of the head may set up destructive reactions in brain tissue with brain damage in severe head burns. Not to be overlooked are the effects of narcotics, sedatives, and tranquilizers.

These result in a syndrome labeled encephalopathy of burns, manifested by the symptoms and signs which psychiatrists label organic brain syndrome. The signs are confusion, delirium, impulsiveness, irritability, loss of memory, inappropriate mood swings, hallucinations, delusions, and other pathologic mental phenomena. Less obvious signs include reduced tolerance for frustration and deprivation, long lasting and severe disorganization after frustration, impaired alertness and vigilance, and loss of initiative.

Post-burn reactions—The cycle associated with catastrophe starts as denial. Delusions and hallucinations may enter the picture. From denial the patient progresses to repression, then constriction, suppression, and, finally acceptance. Only after acceptance of realities can the patient take advantage of the treatment program. Using this sequence as a basis for

evaluation of the patient's progress, treatment can be adjusted to his ability to take advantage of it.

Depressing factors—During the painful inactivity of recuperation, the patient undergoes forced regression and helplessness. This state is frightening. It denies to the patient the gratification of caring for himself and may deny him comforts that make up the small pleasures and dignities of life such as scratching one's itches, smiling without pain, wiping one's self after toileting, blowing one's nose, and being able to turn over. Some patients develop a conditioned reaction in a hospital situation. Doctors and nurses are associated with pain, rather than with helpfulness. Confusion may develop in the patient's mind as to whether those taking care of him are helping or are causing the pain.

Limit testing and hostility—In contrast to these internal phenomena, there may be external, overt, behavioral reactions. The patient who is proud of his independence may avoid making requests for help from the nurses. He must finally accept help, but then may develop excesses. He may do some limit testing to determine how much regression and dependency will be tolerated. Aggressive outbursts may occur. Some patients try to protect themselves by withdrawing. Recovery will be followed by major emotional scars and guilt feelings. Most of these events and memories eventually dissolve in the repression and amnesia that blanket the period of critical illness.

Fear—When a person faces catastrophe of a major burn, he may be overwhelmed by fear of impending death, a long painful course to demise, or prolonged painful recovery. Other losses are associated. Disfigurement of a pretty face, death of a loved child, deep injury to an athlete's legs, or destruction of material assets are examples.

Sensory deprivation—Some burned patients develop considerable misunderstanding of what is happening as a result of sensory deprivation. The burn episode is unanticipated, and within one brief instant the patient is wrenched from accustomed surroundings and activity. Without visitors, frequently in isolation, and especially at night, he is vulnerable to misinterpretation and hypersensitivity. Hallucinations, delusions, and other bizarre mental phenomena are determined by the patient's internal needs. But deprivation can augment their force.

A patient with organic brain damage or derangement is particularly sensitive to misinterpretation of stimuli. In moving his own head, he he may perceive a nail on the wall moving. Depending on his internal forces, he may see hallucinations and be impelled to attempt escape. A patient may jump out of the window during a period of such mental confusion.

Staff reaction to the patient—Those taking care of the patient have reactions to him and his performance. Initial response to the situation is in accord with the physician's dedication to saving of life. Gradually, patience may be worn thin by hostility, coarseness, dependency, and the slow recovery characteristic of burned patients. There is apt to be disappointment and resentment resulting from the apparent apathy of the chronically ill patient. Physicians or nurses may underestimate the degree of dependency of the patient because of fear of getting into a similar situation. Indifference, apathy, or callousness may

be part of the reaction to the patient with serious burns. It is a self-protective mechanism to avoid painful identification with the patient to whom they must continue to render the painful stimuli of some life-saving procedures.

One barrier is isolation. Most burn patients must be isolated until danger of infection is past. It is difficult for a physician encased in gown and mask to communicate spontaneously with a patient encased in heavy bandages. Interaction suffers.

Some patients are disturbing because of their unwarranted independence. One woman behaved as though nothing had happened to her, although it was obvious that she would die shortly. This denial is frightening to personnel, as it should be, and is extremely difficult to tolerate.

Treatment

Recognition is the prelude to treatment of the psychiatric symptoms of burned patients. The following outline is submitted as a guide.

Anticipate questions—At first, the patient will be too frightened even to ask if he will survive. As soon as he indicates readiness he should be given a forthright statement of extent of loss, anticipated length of stay in the hospital, and surgery to be required. The phrase, "You're lucky to be alive" is rarely of help.

Protect from self injury—Confusion, disorientation, and misinterpretation lead to tearing off dressing, removal of catheters, or attempts to crawl out of windows. Special guard may be necessary, or members of the family may be drafted for duty as protectors.

Use persuasion—Some of the reactions are childlike and respond to gentle persuasion. Restraints have a place in treating psychiatric disorders and are recommended when staffing does not permit constant attendance.

Set limits—Dependency should not be allowed to develop to the point that the patient is continually whining and calling. Limits should be established early.

Include rehabilitation—Cerebral stimulation is essential even in the acute phase. Radio or television can be useful. Exercise should be encouraged. Students should continue school work. Physical and occupational therapy should be started at the earliest possible date. Mutual support produces better than average morale. When several individuals are burned in the same fire, placement together can facilitate a teamlike response. Nurse assignment should not be changed frequently.

Develop relationships—This requires 10 to 15 minutes per day spent with the patient in activities that do not cause pain. This may be just sitting down to chat.

Use visitors—Visitors should be encouraged. Chairs provided for them will convey a message to the patient that he has the visitors' undivided, unhurried exclusive attention. Visitors may need instruction about how much to tell the patient, how to meet the problems of depression and of disfigurement. They may need some bracing to remain unruffled when faced with unpleasant appearances, obvious pain, and unpleasant odors. Visiting is difficult when the patient is isolated. Some units are now equipped with telephone or intercom units. Visitors, or volunteers, can do much for the patient's morale by grooming, manicuring, and providing other services.

Clinical Complexities in Work Adjustment of Deprived Youth

CELIA BENNEY with HERBERT HOCHAUSER and JAY SLOMA

The development of community psychiatry and a public health approach to dealing with social and emotional problems have brought clinicians into new affiliations with the institutions and agencies to which troubled people bring their problems. Among such institutions are the State employment service offices.

A cooperative project was developed in which a rehabilitation agency offered casework consultation and comprehensive services to a Youth Opportunity Center of the New York State Employment Service. One purpose was to identify applicants needing clinical services. Other purposes were to provide vocational evaluation and training of applicants and to enhance the professional skills of the employment counselors. An assumption was that many young persons who would not seek help from a psychiatric or family agency would be willing to come for vocational counseling and placement.

The Altro Health and Rehabilitation Services—Youth Opportunity Center project had a unique constellation of features: the placement of a consultant caseworker in the office of the Youth Opportunity Center, with access to his agency's relatively complete diagnostic services, including psychiatric consultation and psychological testing; the opportunity for the use of the rehabilitation agency's workshop for vocational evaluation and a variety of training opportunities in semiskilled and skilled occupations; and the availability of intensive casework services in the rehabilitation setting, where the caseworker was responsible for coordinating all services. The Youth Opportunity Center assumed responsibility for continued employment counseling and placement.

A review of the first 100 persons in the Youth Opportunity Center for whom the counselors sought consultation revealed that almost the entire group was eligible for service from the New York State Division of Vocational Rehabilitation. Thirteen had been patients in mental hospitals; 35 were mentally retarded; 34 had physical handicaps of various intensity; and 31 were diagnosed as psychiatrically ill. Among the physical disorders were serious obesity problems, sickle cell anemia, cardiac illness, brain damage, polio residual symptoms, kidney conditions, asthma, muscular dystrophy, headaches, speech and visual problems, hypertension, and brain tumor. Emotional conditions ranged from severe anxiety reactions and behavioral disorders to deep depressions involving suicidal risk. Most applicants came from marginally poor families, and approximately one-third were receiving public assistance.

Forty persons were placed in the Altro Work Shops. For the remaining 60, the services of the consultant caseworker and the other professional resources of Altro were used. Consultation served three purposes: sharpening the diagnostic process, expediting the use of community resources, and en-

Condensed with permission from *Social Casework*, 50(6):330-336, 1969.

hancing the competence of the counselor to deal with presenting problems.

In addition to the direct consultation service, counselors were invited to participate in intake conferences, evaluation meetings, and psychiatric seminars at the Altro Health and Rehabilitation Services. Although no quantitative or qualitative evaluation of the results of the consultation was made, it is known that after the project was instituted other centers purchased consultation services when funds became available.

The Altro Work Shops consist of three programs: a garment manufacturing plant, a clerical service bureau, a jobbing machine shop, and a bench assembly plant. The work is real and payment is related to production norms in industry.

The 40 young persons accepted at the Altro Work Shops exhibited the same emotional and physical problems as the group of 60 persons. Among the mentally retarded persons, for example, were some who were functionally retarded and some who had been inappropriately labeled as retarded.

It is not easy to assess the results of the efforts directed to the group. What should be measured? Normal young people change jobs frequently. Why should not these young people? It is difficult to assess the result of training that is not immediately utilized for industrial employment. Is the result good when the client obtains a job but has acquired no increase in skill and not good when the client acquires a skill but remains in the workshop for counseling services?

The workshop provided an environment where earning and learning were built in together. The pervasive feelings of loneliness, depression, hopelessness, helplessness, and resignation to failure were more familiar and egosyntonic to the group than was success. Superficial symptoms appeared to result from feelings of anger, but the basis often was unmet dependency needs.

Applicants referred to the workshop completed a screening process including interviews with a social worker and psychiatrist and testing by a clinical psychologist. The problem of diagnosis was not difficult and the initial assessments were, on the whole, sustained. There were, however, several clients for whom diagnostic determination could be made only after they were provided with a workshop placement and a relationship with a professional person.

The work supervisors who came from industry were partly attuned to the needs of the young people, based on experiences with emotionally disturbed retarded adolescents. They knew that "sitability" is not easily achieved by the young. As the greater number of young people with serious difficulties were brought into the work areas, the ratio of trainee to supervisor had to be reduced. A four-hour schedule seemed helpful in coping with the problem of leaving work stations and wandering around. The idea of limited work tolerance had been established when the supervisors had been dealing with the chronically physically ill, and it seemed to be equally useful in training a disadvantaged young person.

Problems included absenteeism, breakage and spoilage, overt defiance, and complaints about the monotony of the work. The method of handling behavior ranged from planned permissiveness to temporary suspension and involved changes from higher level to lower level jobs, and vice versa, and

the use of wage incentive. Flexibility in being able to move the youngsters from one program to another became an effective treatment tool.

An obvious need was for remedial reading and arithmetic. Although it was not possible to offer extensive help in these areas, it was supplied in selected cases on a one-to-one basis with gratifying results.

Individual Treatment

Although some young persons initially perceived social workers as passive listeners, an active casework approach, utilizing well known reaching out techniques yielded some valuable results. The following material shows the application of an approach based on understanding of personality dynamics, active intervention, and continuous service.

Group Treatment

In addition to the casework relationship, the clients had highly rewarding group experiences. In traditional group counseling sessions, they had an opportunity to discuss with persons in authority their problems, their difficulties in commitment to work, their fears of separation, and the usual identity struggles of adolescence. A gratifying occasion occurred when a group of girls was able to approach two caseworkers and ask for supervision. The girls wanted help in arranging activities outside the shop; they also wanted the social workers to lead their discussions.

Need Of Medical Care

Among other impediments to vocational achievement are medical problems that have been neglected. Although it has been suggested that health has a relatively low priority in the value system of the poor family, it can be postulated that neglect of health is a reaction to devasting experiences with poor, careless, disrespectful, and often harmful delivery of health services. It was illuminating to observe that several young people responded positively to the special attention of an excellent clinic for adolescents. Whenever necessary, training is interrupted for intensive medical examinations. One young woman who complained of headaches was found on examination to have an inoperable brain tumor. Another alarming situation was that of a girl who had no vision in one eye and seemed to be losing the sight of the other eye. Consultation in the clinic for adolescents led to the diagnosis of a corneal defect. The girl's vision was corrected with contact lenses.

The provision of therapeutic services and vocational training to young people with social, psychological, and developmental defects does not lend itself to quick assessment or instant results. Maturational problems accompany the other evident problems, and immediate success cannot be expected for all. Implicit in the work of the project was the recognition that some young, deprived persons need time to mature and a reason for doing so, that there are no simple solutions to their problems, and that clinical services *must* constitute a part of the armamentarium of service.

Mental Health and the Law

Recent Cases

State of Louisiana v. Hampton, 218 So. 2d 311, January 20, 1969

The defendant was charged with the attempted murder of her infant daughter. She was found to be mentally incapable of standing trial; following a period of treatment at a hospital, the superintendent reported to the court that the defendant had regained her mental capacity. Two members of the sanity commission reported that the defendant was legally sane: She could understand the proceedings and assist in her defense. They attributed her improved condition to the use of the psychotropic tranquilizing drug, chlorpromazine. As prescribed, the regimen consisted of 100 milligrams of chlorpromazine four times per day, a moderately high dosage. A psychiatrist testified at the sanity hearing that the defendant's psychotic symptoms were in remission, but if the dosage were discontinued, she would probably relapse.

The trial judge found the defendant to be only "synthetically sane," and ruled her presently insane or incompetent, and therefore unable to stand trial. On appeal, the State Supreme Court reversed, holding the defendant competent to stand trial. The opinion stated that ". . . [A] defendant whose mental capability is maintained only through the use of prescribed medication [is] competent to stand trial. . . . The likelihood that defendant will relapse if the use of the medication is interrupted does not bar her from proceeding to trial."

People v. Garcia, 74 Cal. Rptr. 103, Court of Appeal of California, Division 4, Second District, January 9, 1969

Garcia, pursuant to California's Narcotic Rehabilitation Act, was civilly committed as a narcotic addict. He appealed from the order of commitment, alleging that while all the procedural requirements of the Act were complied with, his constitutional rights (Fifth and Sixth Amendments) were invaded as a result of the interrogation by a physician necessary as part of the required medical examination designed to determine medical facts as a basis for the commitment.

The Court of Appeal affirmed the commitment. The opinion stated that "(a) commitment . . . for narcotics' addiction is a civil proceeding which has treatment, and not punishment, as a major purpose. . . . (W)e are concerned with alleged violations of the Fifth and Sixth Amendments by a non-police officer. . . . (W)e conclude that the difference is material and that the Escobedo-Dorado-Miranda rules do not apply to interrogation by a physician conducted solely as part of a statutorily required medical examination designed to determine medical facts as a basis for a treatment program. We point out that we do not deal with a case where a physician—psychiatrist or not—acts as an agent of the prosecution in order to obtain evidence to be used in a criminal prosecution; here the examination was not by an agent of the police and was of a nature that, usually, cannot be intelligently conducted without some interrogation of the examinee on mat-

ters that are likely to be 'incriminating'. . . ."

In re Sealy, 218 So. 2d 765, District Court of Appeal of Florida, First District, February 13, 1969

The mother of the petitioner—he is a 26-year-old, self-professed "hippie" —following an altercation with her son which resulted in his arrest, filed a petition that he be adjudged incompetent. Testimony at the sanity hearing held pursuant to the petition disclosed that Sealy during the past eight years had been in and out of several universities. In addition to his beliefs in love and nonviolence, he professed to be an atheist. His beliefs and personal conduct brought him into disagreeable conflict with his father as well as his mother and her husband. He fathered an illegitimate child, and resented the attitude of his mother and stepfather toward the child. Following the hearing and mental examination, the petitioner was declared incompetent and was committed. He appealed the court's determination.

The Court of Appeal reversed. The opinion noted that "partially because of a broken home appellant adopted a way of life which caused him to entertain philosophies and beliefs foreign to those of his parents. He lived the life of a typical 'hippie' . . . in the sincere belief that this way of life was preferable to that of his parents and the great majority of those comprising our society. . . . His demands upon his parents became burdensome, and his personal appearance, conduct and beliefs offensive, embarrassing and objectionable." But "(t)he fact that he elected to lead the kind of life, entertain beliefs and engage in conduct which was offensive, repulsive, and objectionable to others does not necessarily indicate mental incompetence, nor does it justify confining him in a mental institution primarily in order to alleviate the financial drain upon his parents and the embarrassment he was causing them. . . . (While) appellant's mother, in petitioning the court for an adjudication of incompetency, was motivated by a sincere desire to save appellant from a life of waste and degradation, and by medical treatment to have him restored as a useful member of society . . . the weight of the evidence militates against the conclusion that he is legally insane."

Shapiro v. Thompson, United States Supreme Court, Nos. 9, 33 (Washington v. Legrant), and 34 (Reynolds v. Smith), October Term, 1968, April 21, 1969; 37LW4333

These three joined cases are all appeals from decisions of three-judge Federal District Courts holding unconstitutional a State or the District of Columbia statutory provision which denies welfare assistance to persons living in a State or the District for less than one year immediately preceding their applications for such assistance. The Supreme Court affirmed, finding that the statutory one-year State residence requirements upon which Connecticut and Pennsylvania had conditioned receipt of public welfare assistance are discriminations in violation of the equal protection clause of the Fourteenth Amendment, and that the congressional enactment for the District of Columbia is a discrimination so unjustifiable as to violate the due process clause of the Fifth Amendment "[W]hile the Fifth Amendment contains no equal protection clause, it does forbid discrimination that is 'so unjustifiable as to be violative of due process'." The Court said that "even under traditional equal protection

tests a classification of welfare applicants according to whether they have lived in a State for one year would seem irrational and unconstitutional." Since the classification here also infringes upon the constitutional right of interstate travel, it must be judged by the stricter requirement of "compelling" State interest, a standard under which the residence rule clearly falls short of equal protection requirements.

Chief Justice Warren and Justice Black, dissenting, read Section 402(b) of the Social Security Act as a specific congressional enactment of nationwide residence requirements. The majority, however, saw this Section as merely directing the Secretary of Health, Education, and Welfare not to disapprove plans submitted by States because they include a one-year requirement; and even if it were a congressional enactment, it would be unconstitutional, as Congress cannot authorize the States to violate the equal protection clause, the majority concluded.

It is quite possible that the weight of these decisions will also fall on other types of State assistance programs such as medical care in public facilities for indigent or near indigent residents. To the extent that present State residence laws constituted a stumbling block in complying with Federal requirements in the community mental health centers program, these decisions could have a considerable impact.

Mental Health News Digests

Mental Health Programs of the World Health Organization

Shortages of trained personnel is one of the most pressing problems in mental health throughout the world. WHO therefore is using two approaches to deal with this problem: training of staff in basic health services to carry out mental health work along with their other duties; and inclusion of mental health—psychiatric—training as an integral part of the medical school curriculum.

Prevention of suicide was the topic of another recent study, with emphasis on identification and care of high-risk groups and establishment of suicide prevention centers. Education of both professional groups and the general public in suicide prevention also received attention.

An international pilot study on schizophrenia is now underway. A preliminary study aimed to devise standard procedures to detect cases of schizophrenia and to assess the degree of impairment, to compare schizophrenic disorders in different cultures, and to describe the course of the illness after diagnosis. The methods used in this study were revised after experience and are now being applied in field research centers in Aarhus, Denmark; Agra, India; Cali, Columbia; Ibadan, Nigeria; London, England; Moscow, USSR; Taipei, Taiwan; and Washington, D.C., USA.

WHO has over the past several months convened scientific groups to review research in various fields of biological psychiatry preliminary to developing a research program on biological aspects of psychiatry.

Several centers for the collection of information on psychotropic drugs have been designated. There are now two international centers, one in Paris and another in Washington, and three regional centers, in Dakar, Saporo, and Basel.

Mental Health Centers in Iowa

The first mental health center in Iowa—the Des Moines Child Guidance Clinic—was organized in 1936. In 1946 the Federal government established the Mental Health Authorities in the States, and in 1947 the Iowa Legislature designated the State Psychopathic Hospital in Iowa City, through its director, as the Authority in Iowa. The center movement then began in earnest. By 1956 there were eight centers, from 1956 to mid-1968 twelve more were added, and by 1969 there were two more, making a total of twenty-two centers.

In 1956 only 14 counties, representing 34 percent of the State's population, had access to the centers; in 1968, a total of 58 counties, representing 70 percent of the State population, had access. In nine of the 41 remaining counties active planning for centers is underway. The number of persons served increased from 1,939 in 1956 to 13,132 in 1968. And the budget for the centers increased from $235,000 in 1956 to over $2,500,000 in 1969.

A recent analysis of cases by age shows that 40 percent of patients are children. Diagnoses for all cases range from transient personality disorders to psychoses, with the majority not requiring hospitalization. Statistics on treatment outcome report 75 percent improved and 25 percent not improved.

Some of the characteristics of the Iowa system are: The centers are autonomous units, privately incorporated and locally controlled. The centers have boards of directors made up of citizens who represent various segments of the community, representatives of the agencies using the center's services, county boards of supervisors, and sometimes the General Assembly. The centers have multiple sources of financing, drawing funds from the counties, United Fund Organizations, fees for services, gifts, and small amounts from the Mental Health Authority; the centers have considered themselves as partnerships between public and private. The centers have had an educational and consultative relationship with the Psychopathic Hospital through the Mental Health Authority, with staff at the Hospital providing the "know-how" on the organization, staffing, financing, and operations. Also, the Hospital—the major training facility in the State for mental health care—has assisted in persuading professional persons to come to Iowa communities.

Also important was the Statewide mental health planning done in 1963–65 under the Mental Health Authority. This involved many segments of State government, institutions, medical and other professional groups, universities, many knowledgeable citizens, staff of the Hospital, and the centers themselves. One result of this planning was the concept of comprehensive care.

During this period, private practice of psychiatry has increased, as well as the number of psychiatric units in general hospitals. The centers' activities, together with those of the private practitioners, and improvements in the State mental hospitals have resulted in a 73 percent decline in the State hospital population. (Adapted from an article by Dr. Paul E. Huston in the June 1969 Journal of the Iowa Medical Society.)

Clinical Science Research Award

The A. E. Bennett Clinical Science Research Award of the Society of Biological Psychiatry was presented to Michael Taylor, M.D. and Robert Levine, M.D. for their research on "Interactive Effects of Maternal Schizophrenia and Offspring Sex." This research was done in the Division of Biological Psychiatry of New York Medical College.

Research Training in Psychiatry

The School of Graduate Studies Downstate Medical Center of the State University of New York in Brooklyn has a two-year program in research training in psychiatry and in combined clinical and research training. The program is intended to give psychiatrists with a minimum of two or three years of residency an opportunity to do research as well as to become familiar with the theory, knowledge, and techniques of investigation in psychiatry and related fields. Psychiatrists may spend full time in research and course work, and if they follow this plan may qualify for the Doctor of Medical Science degree upon completion of a dissertation based on their research. Or they may combine research with clinical training in child psychiatry, psychosomatic medicine, or community psychiatry.

Information about the program may be obtained from Dr. Herman A. Witkin, Program Director.

Training for Psychiatry in the Public Health Service

Career development opportunities for physicians who wish to specialize in psychiatry in the U.S. Public Health Service, through the Mental Health Career Development Program, are now available.

Those selected receive up to eight years of professional development, starting after completion of internship and progressing through residency training, clinical experience postgraduate training in a mental health specialty to assignment in a leadership role as fully trained psychiatrists in the Public Health Service.

The Program is designed to provide training and continuing development to persons of outstanding potential who are interested in the variety of career possibilities in the mental health disciplines within the Public Health Service. Applicants may enter at any stage of their professional development–from the beginning of residency in psychiatry through post-graduate specialty training. Training is tailored to individual goals and to the needs of the Public Health Service by means of an individually planned career development sequence. During training, appointees are fulltime staff members of the National Institute of Mental Health and receive regular salary, retirement, and other perquisites; they can also fulfill their Selective Service obligations as Commissioned Officers of the Public Health Service.

Participants in the program spend the first three years in basic residency at an accredited training center of their choice. They spend the next two years gaining supervised experience that prepares them for certification by the American Board of Psychiatry and Neurology. During this period, based on their interests, they are placed in one of the various NIMH programs —patient care, research, community psychiatry, teaching, consultation, and mental health program planning and development. In the sixth and seventh year the Career Development Officer occupies a staff position in an NIMH-PHS activity.

A total of 66 psychiatrists are now serving with the Public Health Service as members, or alumni, of the program.

Information about the program may be obtained from:

Chief, Mental Health Career Development Program
National Institute of Mental Health
5454 Wisconsin Ave.
Chevy Chase, Md. 20015

Drug Dependence—A New Journal

Drug Dependence is a new journal prepared by the NIMH's Division of Narcotic Addiction and Drug Abuse and the National Clearinghouse for Mental Health Information. Its purpose is to facilitate the dissemination of information about drug dependence and abuse and related areas. In addition to articles and reviews, each issue will have a section made up of drug dependence abstracts. Occasionally it will reprint "classic" articles.

The first issue which appeared in July 1969, contained a detailed description of the program of the Division of Narcotic Addiction and Drug Abuse, an article by Stanley H. King on "Youth in Rebellion: An Historical Perspective," an article by Werner Simon and Gayle K. Lumry on "Alcoholism and Drug Addiction Among Physicians—Chronic Self-Destruction?" and an article by Norman King

on "Ether Drinking," which originally appeared in the *New Review* in 1890, as well as some 50 abstracts.

Plans are to issue *Drug Dependence* on an experimental basis with complimentary copies available for the first several numbers. Later the journal will become a regular quarterly and be available on paid subscription. Requests to receive copies should be addressed to:

Drug Dependence
National Clearinghouse for Mental Health Information
National Institute of Mental Health
5454 Wisconsin Ave.
Chevy Chase, Md. 20015

Reorganization in Maryland

A new cabinet-level post—Secretary of Health and Mental Hygiene—as well as a new Department of Health and Mental Hygiene, was established by the 1969 session of the Maryland General Assembly and became effective July 1, 1969. It replaces the State Board of Health and Mental Hygiene. The new Department embraces the State Departments of Health, Mental Hygiene, Juvenile Services, the Comprehensive Health Planning Agency, and several smaller health agencies. Dr. Neil Solomon, formerly on the staffs of both the University of Maryland and the Johns Hopkins University, is the new Secretary of Health and Mental Hygiene.

Social Clubs for Former Psychiatric Patients

During the past several years a great many social clubs for former psychiatric patients have been started. In general, the clubs have had only loose relationships with one another, have been organized in quite different ways and for different purposes, and have struggled with many of the same problems. Since such clubs may well be one important facet in the rehabilitation of patients, the Connecticut Association for Mental Health held an Institute to discuss the goals, purposes, and structures, of social clubs and procedures for running them. Presently operating social clubs were evaluated. The proceedings have now been published as a public service by the Connecticut Mutual Life Insurance Co. and are available free of charge from the Connecticut Association for Mental Health, Inc., 123 Tremont St., Hartford, Conn. 06105.

Baltimore Mental Health Advisory Council

A 28-member Mental Health Advisory Council to the Baltimore City Health Department has been organized by the Commissioner of Health to coordinate and plan improvements in mental health programs in Baltimore. Members consist of leaders in the mental health field and those whose work brings them in close association with problems of mental health.

Iowa Comprehensive Alcoholism Project

An evaluation of the Iowa Comprehensive Alcoholism Project (ICAP), a research and demonstration project of the Office of Economic Opportunity, has recently been published. The ICAP is a project for the study, prevention, and treatment of alcoholics and the rehabilitation of indigent alcoholics. The evaluation concludes that the project had a major impact on certain aspects of alcoholism in Iowa and that it served as a catalyst to involve community leaders and agency heads in the problem. The report also recommends that services

be expanded to include early intervention, stricter definition of qualifications of staff, and additional training for staff.

Copies of the 66-page report may be obtained for $3.00 each from Greenleigh Associates, Inc., 358 Lexington Ave., New York, N. Y. 10017.

Applications of Mental Health Statistics

A new publication of the World Health Organization is "Applications of Mental Health Statistics: Uses in Mental Health Programmes of Statistics Derived from Psychiatric Services and Selected Vital and Morbidity Records" by Morton Kramer. Dr. Kramer is Chief of the Biometry Branch, Office of Program Development and Evaluation, National Institute of Mental Health.

The 112–page monograph begins with a discussion of some basic requirements for the development of national statistics on mental disorders. It then reviews uses of data from psychiatric facilities, mortality data, data relating to pregnancy, natality, and perinatal mortality, and data from records of other health, social, educational, and related agencies. Additional needs for population data and other techniques for the collection of data are outlined. The monograph concludes with a section on needs for international collaboration in further development of national statistics of mental disorders.

The monograph is one of a series deriving from WHO's extensive program, begun in 1957, aimed at furthering an epidemiological approach to the study of mental disorders.

The monograph may be ordered from the American Public Health Association, Inc., 1740 Broadway, New York, N.Y. 10019, for $3.00. Orders may also be addressed to the World Health Organization, Distribution and Sales Unit, Geneva, Switzerland.

International Directory of Gerontology

An International Directory of Gerontology has been issued by the National Institute of Child Health and Human Development. It was prepared by the Gerontology Society and provides biographical sketches of persons concerned with research on aging. Information about the Directory may be obtained from NICHD, Bethesda, Md. 20014.

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(Continued from Inside Front Cover)

been established; three others are planned. The centers are closely coordinated with the North Dakota State Hospital, which has been upgraded and reorganized into regional units.

The College Center in Boston was given the Silver Award for its program to meet the mental health needs of 58,000 students, faculty, and staff members of twenty-one colleges in the Boston area. The Center provides these services more economically than individual colleges could and is the first of its kind. Similar centers are being organized in educational settings in several other cities, and the concept could be applied in business and industry.

Winterode School, a fully accredited 12-grade school on the grounds of the State Hospital at Crownsville, Maryland received the Bronze Award. By enabling young patients to continue their education while they are in the hospital, Winterode has improved their chances of making a good adjustment in the community. The school offers a full curriculum in academic courses as well as vocational training in ten different fields.

The Achievement Awards are given annually by the American Psychiatric Association in recognition of outstanding psychiatric service programs in the United States and Canada. The Awards for 1969 were announced at the Association's Institute on Hospital and Community Psychiatry in Houston, Texas on September 15–18, 1969.

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